BADARAU, E.;GLURGEA, GH.;GRUMAZESCU, M.

Inclination of the walls of a room, and its influence upon the informity of the sound field. p. 263.

COMUNICARILE. Bucuresti, Rumania. Vol. 8, no. 3, Mar. 1958.

Monthly List of East European Accession (EEAI), LC. Vol. 8, No. 9, September, 1959

Uncl.

BADAREU, E.; STEFANESCU, D.; POPOVICI, C.

Contribution to the study of high-frequency discharges in methane p.5

REVUE DE PHYSIQUE (Academia Republicii Populare Romine) Bucuresti RUMANIA
Vol. 4, no. 1, 1959.

MONTHLY LIST of East European Accessions (EEAI) L C, Vol. 9, no. 2, FEB 1960

UNCL.

The kinetics of positive ions at the cathode of a luminescent discharge in mercury vapors. B. Bădăreu and M. Hagiescu-Mirițe. *Acad. rep. populare Romîne, Inst. fiz. atomică și Inst. fiz., Studii cercetări fiz.* 10, 429–33(1959).—In a luminescent discharge, the motion of ions in the gas phase near the cathode is almost exclusively controlled by the phenomenon of electron transfer. S. A. Stern

BADAREN, E.

V High-frequency discharges in methane. E. Badaren, D. Steffănescu, and C. Popovici. *Rev. phys., Acad. rep. populaire Roumaine* 4, 5-13(1959)(in French).—The objective was to det. the mechanism of the discharge phenomena and establish the nature of the products obtained. The discharge tube of borosilicate glass was 620 mm. long and had a diam. of 58 mm. The external 5 mm. Al wire electrodes were in coaxial spools 70 mm. long and 72 mm. in side diam., positioned at the extremities of the discharge tube. The expts. were performed at 4300 v. electrode voltage, 100 ma. discharge current 600 kHz frequency, and a gas pressure of 6 mm. Hg at 0°. The gas velocity was the variable parameter. A product in the form of brittle platelets formed on the walls of the discharge tube in the neighborhood of the electrodes. The product was a polymer of C and H (formula $(CH)_n$) which was insol. in >60 org. solvents, indicating n was high. The color of the platelets changed from yellow in the marginal region of the electrodes, close to the pos. column, to yellow-red at the level of the electrodes. All platelets had the same compn. and properties, except some light-yellow ones whose slight soly. in $C_6H_5NO_2$ indicated a lower degree of polymerization. Other properties of the main polymer were: thermal stability to 350°; complete inertness to Br, Cl, O_2, O_3, and to acids such as HCl, HF, HNO_3; considerable resistance to concd. H_2SO_4; and high purity. No C or other product was deposited on the wall of the discharge tube whatever the flow rate of the gas. The deposition of the polymer from CH_4 was accompanied by the formation of C_2H_2 and of liquid products, such as cyclopentadiene and indene. The liquids were easily sepd. by distn. or by trapping at different temps. The yield of C_2H_2 was very sensitive to gas-flow rate and passed through a sharp max. as the rate was increased. The yield was 25% of that corresponding to the reaction: $2\ CH_4 \rightarrow C_2H_2 + 3\ H_2$. By increasing the length of the pos. column, which was done by increasing the distance between electrodes while maintaining the potential gradient in the column const., the yield of C_2H_2 could be raised considerably. For example, at a flow rate of 0.015 cm./sec. the C_2H_2 yield rose from 8.5 to 24.44% of the theoretical yield (by wt.) when the distance between electrodes was increased from about 8 to 42 cm. When CH_4 was introduced at one end of the discharge tube and evacuated through the other, the amt. of polymer formed near the 2nd electrode (in the direction of flow) was 20 times larger than that formed near the 1st electrode. When CH_4 was introduced through the ends of the tube and evacuated from its middle, equal amts. of polymer were deposited near the 2 electrodes. The increased amt. of polymer found close to the 2nd electrode was due to the polymerization of C_2H_2 in that region. C_2H_2 is formed by the mechanism $2\ CH \rightarrow C_2H_2$. Formation of CH radicals in the discharge, in large concns., is highly probable. The absence of C formation is attributed to the reaction $C_2 + 2\ H \rightarrow C_2H_2$ which was favored by the large concn. of H atoms present, as evidenced by the intense blue-violet color of the discharge.

S. Alexander Stern

4E5d
4E2c(4)
4E7(4)
6

BADARAU, E., acad.; GRUMAZESCU, M.

On certain conditions of measuring the absorption coefficients of sound-absorbing materials and structures in a diffuse field. Studii cer.fiz. 10 no.4:617-625 '59. (EEAI 9:5)
(Absorption of sound) (Echo)

BADARAU, E., acad.; POPESCU, I.

Some problems related to the phenomena occurring at the cathode of the luminiscent discharge. Studii cer.fiz. 10 no.4:689-732 '59. (EEAI 9:5)

1. Institutul de fizica al Academiei Republicii Populare Romine, Bucuresti si Laboratorul de electronica in gaze al Universitatii "C.I.Parhon," Bucuresti.
(Cathodes) (Electric discharges through gases) (Luminescence)

RUMANIA/Radio Physics - Electronic and Ionic Emission. I-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 6502

Author : Badarau, E., Petrescu Paul
Inst : -
Title : Phenomenon of Exoelectronic Emission.

Orig Pub : Studii si cercetari fiz., 1959, 10, No 1, 187-192

Abstract : Survey article. Bibliography, 25 titles.

Card 1/1

BADAREU, E.

Distr: 4E3a(w) 2 cys

Phenomena at the cathode of the glow discharge. E. Bădărău and I. Popescu (Univ. "C. I. Parhon," Bucharest). *Acad. rep. populare Romîne, Inst. fiz. atomică şi Inst. fiz., Studii cercetări fiz.* 10, 689-732(1959).—Most excitations and ionizations are produced in the negative glow, which represents an equipotential plasma, traversed and maintained by electrons, not numerous but energetic, that arise from the cathode or the cathode dark space. The no. of ions produced by a primary electron is not sufficient for the extn. of an electron from the cathode; therefore other factors are operative in the emission of electrons by the cathode, e.g. the photoelec. effect. The ion kinetics are dominated by transfer processes, and as a consequence, by the formation of the space charge in front of the cathode; in the neg. glow the ion movement takes the form of an "isotropic carrier," in the dark space, the form of an "anisotropic carrier," in the direction of the field; they arrive at the cathode with approx. half the energy corresponding to their last mean free path of transfer. The no. of ionizations in the dark space is negligible, thus in that region the elec. current is carried practically only by the pos. ions, which arise by diffusion from the neg. glow. The large current amplification, owing to the effect of the double cathode, in comparison to the current of the simple cathode discharge is a consequence of the increase of the ion velocity at the cathode, as well as of their concn. The relations obtained can be generalized for equal application to the quant. interpretation of the normal domain of the glow discharge, where the exponential development of the electronic avalanche must be reckoned with. 120 references.

M. Ben Eliezer

4 I P(c) 2

21(5) RUM/2-60-3-3/36

AUTHOR: Bădărău, E., Academician

TITLE: Thermo-Nuclear Reaction. II.

PERIODICAL: Stiinţă şi Tehnică, Seria a II-a, 1960, Nr 3, p 4-5

ABSTRACT: The article deals briefly with the principles of thermo-nuclear reaction and the future development of nuclear energy by fusion. Reference is made to the Soviet Academician Kurchatov (deceased) and to the USSR where exhaustive research is conducted by the use of a very simple device and also of large installations, such as "Ogra". There are 2 figures.

Card 1/1

BADARAU, E., acad.; POPOVICI, C.

Spectral aspects in the transformation of methane under the action of a high-frequency discharge. Studii cerc fiz 11 no.3:557-562 '60.
(EEAI 10:2)

1. Institutul de fizica al Academiei R.P.R.
(Methane) (Spectrum analysis) (Acetylene)
(Cyclopentadiene) (Indene)
(Electric discharges through gases)
(Polymers and polymerization)

BADARAU, Eugen, acad.; POPESCU, Iovitu; IOVA, Iancu

Mechanism of cathodic regions of the abnormal luminiscent discharge in helium. Studii cerc fiz 11 no.3:597-603 '60. (EEAI 10:2)

1. Laboratorul de electronica in gaze, Facultatea de matematica si fizica a Universitatii C.I.Parhon, Bucuresti.
(Helium) (Cathodes) (Luminiscence)

BADAREU, E.

SURNAME (in caps); Given Names

Country: Roumania

Academic Degrees: [not given]

Affiliation: Laboratory for Gas Electronics of the C. I. Parhon University, Bucharest /no original language version given/

Source: Leipzig, Annalen der Physik, Vol 7, No 7-8, 1961, pp 418-424.

Data: "The Contribution of Photons to the Electron Extraction from a Cathode During Glow Discharge in Hg-Vapor."

Authors:

BADAREU, E.
WAECHTER, F.

SOV/25-59-5-23/56

AUTHOR: Bedereu, E., Academician (Bucharest)

TITLE: Acetylene Out of Natural Gas

PERIODICAL: Nauka i zhizn', 1959, No. 5, pp 37-38 (USSR)

ABSTRACT: The author, Member of the Rumanian AS and author of 100 Scientific Works, describes natural gas, which is so abundant in Rumania. It is a pure methane of 99.9%. A new method of producing acetylene from it has been invented. The method consists of passing gas through an HF electric current. The resulting liquefaction or even solidification of gas produces polymers, of high thermo-resisting quality (up to 400°). Other valuable synthetic elements have been produced such as synthesis of cyclopentadiene and of indene. There are 2 diagrams.

ASSOCIATION: Institute of Physics, Rumanian Academy of Sciences, Bucharest.

Card 1/1

BADARAU, Euron
SURNAME (In caps); Given Names

Country: Rumania

Academic Degrees: -Academician-

Affiliation: Director, Institute of Physics of the Rumanian Academy (Directorul Institutului de Fizica al Academiei RPR).

Source: Bucharest, Stiinta si Tehnica, No 8, Aug 1961, pp 9.

Data: "Communism Will Become a Reality."

24,1200

S/058/62/000/009/014/069
A006/A101

AUTHORS: Bădărău, E., Grumăzescu, M., Matei, L.

TITLE: The relationship between absorption coefficients measured in a pipe and in a diffusion field

PERIODICAL: Referativnyy zhurnal, Fizika, no. 9, 1962, 41 - 42, abstract 90306 ("Studii şi cercetări fiz. Acad. RPR", 1961, v. 12, no. 3, 681 - 691, Roumanian; summaries in Russian and French)

TEXT: A method is described of calculating the coefficient of acoustic absorption in a diffusion field on the basis of acoustic resistance or the absorption coefficient measured in a pipe. The method is based on the introduction of the reflection coefficient, taking into account the oblique incidence of the waves. Calculated values of the acoustic absorption coefficient are given for various materials. When these data are compared with the results of measurements in the diffusion field, a better agreement is noted than in application of other methods.

E. Denisov

[Abstracter's note: Complete translation]

Card 1/1

BADAREU, E.

Studies on the new spectral sources. Rev chimie 7 no. 1: 45-49 '62.

1. Membre de l'Academie de la R.P. R., Institut de Physique de l'Academie de la R. P. R., Bucarest.

L 32807-66 EWP(e)/T/EWP(t)/ETI IJP(c) JD/JG/AT/WH

ACC NR: AP6023766 SOURCE CODE: GE/0061/65/015/05-/0313/0320

62
B

AUTHOR: Badareu, E.; Popovici, C.; Iova, I.; Somesan, M.

ORG: Institute of Physics, Academy of the Rumanian People's Republic, Bucharest

TITLE: Hollow-cathode effect in cesium vapor 14 27

SOURCE: Annalen der physik, v. 15, no. 5-6, 1965, 313-320

TOPIC TAGS: cesium plasma, discharge tube, spectrographic analysis

ABSTRACT: The article deals with processes taking place in a hollow-cathode discharge tube with cesium vapor. The cathode here consists of two parallel plates; the negative charges travel from the space between these plates out toward the anode. The cathode plates are made of nickel embedded in quartz and a cesium pill inside the tube produces the vapor atmosphere. Two sets of measurements were made: 1) electrical (current vs. pressure and current vs. distance between the two cathode plates), 2) spectrographic (intensity distribution of the Cs II lines 4616.13 and 4867.5 Angstroms, also of the Ba I 6019.17 Angstrom line for comparison). This distribution of intensity has a maximum in the middle of the intercathode space; the magnitude of this maximum varies with pressure, attaining the highest value at about 0.01 mm Hg for both Cs lines. A direct relation between spectral in-

Card 1/2

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ACC NR: AP6023766 O

tensity and discharge current is obtained by eliminating pressure as the independent variable for both. As a result, a straight proportion between current and intensity is found. [JPRS]

SUB CODE: 20 / SUBM DATE: 09Nov64 / ORIG REF: 007 / SOV REF: 001
OTH REF: 012

Card 2/2 mgs

BADARAU, G., ENESCU, I., VACARIANU, N.

"Vectorial consequences of a hypertrophy of the left auricle", p. 271. "Journal on science issued by the Iasi Branch, Rumanian Academy; with French and Russian summaries. Quarterly." (STUDII SI CERCETARI STIINTIFICE, Vol. 5, no. 1/2, Jan./June 1954. Filiala Iasi.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

BADARU, G.; ENESCU, I.

Energetic-dynamic deficiency, Hegglin's syndrome, in hypertension.

p. 1741. Academia Republicii Populare Romine. COMUNICARILE. Bucuresti.

Vol. 5, no. 12, Dec. 1955

So. East European Accessions List Vol. 5, No. 9 September, 1956

ENESCU, I.,; BADARAU, G.,; VACARMANU, N.

Vectorcardiograms in hypertrophy of the left ventricle. Bul. stiint med. 7 no.2:443-467 Apr-June 55.

1. Membru corespondent al Academiei RPR (for Enescu)

(VECTORCARDIOGRAPHY, in various diseases
hypertrophy of left ventricle)
(CARDIAC ENLARGEMENT
left ventric., vectorcardiography)

T

Country : RUMANIA
Category : Human and Animal Physiology.
Blood Circulation. The Heart.

Abs. Jour. : Ref Zhur-Biol., No 23, 1956, 106418

Author : Badarau, G.; Braun, A; Fraus, I.
Institut. : AS Rumania, Iasi Branch of Medicine.
Title : Phonocardiographic Studies of Atrial Sounds in Cases of Complete Atrioventricular Dissociation.

Orig Pub. : Studii si cercetari stiint. Acad. RPR Fil. Iasi. Med., 1956, 7, No 1, 77-86

Abstract : In cases of complete atrioventricular dissociation, dichotomy of atrial sounds is observed. The first component corresponds to the a-wave of the mechanogram of the heart's apex and is connected with the flow of blood from the atrium into the ventricle. The second component corresponds to the small negative protodiastolic wave of the mechanogram and is connected with the elastic reaction of the dilated ventricle. When systoles of the atrium and ventric-

Card: 1/2

1598. BĂDĂRĂU L., MUNTEANU M., LUPAŞCU Gh. and BUSUIOC O. *Valoarea examenului cito-hormonal in diagnosticul şi tratamentul avortului endocrin. The value of cyto-hormonal examination in the diagnosis and treatment of endocrine abortion OBSTET. GINEC. (Bucarest) 1956, 4/3 (187-199) Graphs 4 Illus. 12

In the study of 450 cases of threatening abortions 2 types of smears could be distinguished in relation with oestrogens and progesterone: the acidophilic and the deficient type. The acidophilic type is seen especially in the first months. If this acidophilia disappears slowly the prognosis is serious. The production of oestrogens points to an insufficient production of progesterone by the chorion; however, this deficiency can be more or less reversible. The deficient smear type is one with signs of inflammation, cytolysis and navicular cells. This type of smear is more frequent. Besides these 2 types of smear, also other types occur under influence of extragenital steroids. After administration of ACTH the smear shows cytolysis with free nuclei and the appearance of Döderlein bacillus in great quantity and also navicular cells. After cortisone administration a smear of inflammatory type with accumulation of leucocytes occurs. The therapeutic results obtained with oestrogens are due to the antagonism of the 2 adrenocortical functions: of mineral corticoid and glucosteroid action. The authors applied only oestrogens in cases with deficient smear and progesterone in cases with acidophilic smear. The oestrogens were applied vaginally in doses of 5-20 mg./day and this treatment was continued for some months; this way of administration reduced 20-30 times the doses otherwise necessary. The best results were obtained in cases with a deficient smear, where the hormonal treatment is a simple correction of an increased progestative function.

Coja - Cluj

DOBROVICI, V., prof.; BADARAU, Ligia

Peri-uterine and subperitoneal novocain blockade as preliminary time of local anesthesia in pelvic surgery by the abdominal route. Rumanian M Rev. no.3:77-80 Jl-S '60.

(PROCAINE anesth. & analgesia) (ANESTHESIA, CONDUCTION)
(GYNECOLOGY anesth. & analg.) (CESAREAN SECTION anesth. & analgesia)

BADARAU, M.

Designing of Parabolic Aerials. ELECTROTEHNICA (Electrical Engineering.) #7;287:July 55

BADARAU, M.

The EM-552 Radio Receiver. ELECTROTEHNICA (Electrical Engineering) #10:460:Oct 55

BADARCHI, Ch., Cand Agr Sci -- (diss) "Selection of annual fodder crops for the conditions of the central part of the Khangayskaya zone of the Mongolian People's Republic." Moscow, 1960. 13 pp; (All-Union Scientific Research Inst of Fodder im V. R. Williams); 150 copies; price not given; (KL, 22-60, 141)

BADAR'YAN, G.G.; TYUTIN, V.A.; CHEREMUSHKIN, S.D.; ZUZIK, D.T.; KHODASEVICH, B.G.; FRAYER, S.V.; GUSAROV, Ye.I.; KAZANSKIY, A.M.; KASSIROV, L.N.; KARAYEV, S.A.; ABRAMOV, V.A.; VASIL'YEV, N.V.; BUGAYEV, N.F.; SAPIL'NIKOV, N.G.; KASTORIN, A.A.; RUDNIKOV, V.N.; YAKOVLEV, V.A.; PEREMYKIN, V.I.; ISAYEV, A.P.; KUZ'MICHEV, N.N.; IL'IN, S.A.; PROMIN, V.A.; LUK'YANOV, A.D.; SHAKHOV, Ya.K.; IL'ICHEV, A.K., kand. sel'-khoz. nauk; KOGAN, A.Ya.; TSYNKOV, M.Yu.; BABIY, L.T.; GORBUNOV, I.I.; KOVALEV, A.M.; ROMANCHENKO, G.R.; BRODSKAYA, M.L., red.; IVANOVA, A.N., red.; GUREVICH, M.M., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Economics of agriculture]Ekonomika sotsialisticheskogo sel'-skogo khoziaistva; kurs lektsii. Moskva, Sel'khozizdat, 1962. 710 p. (MIRA 15:10)

(Agriculture—Economic aspects)

BADASHEV, Ye.M., inzh.

APT pumps with submergible electric motors. Mont.i spets.rab.v stroi. 22 no.4:19-21 Ap '60. (MIRA 13:8)

1. Trest Soyuzshakhtoosusheniye.
(Pumping machinery)

AUTHOR: Badayev, A.M. SOV/113-59-2-17/20

TITLE: A Highly Efficient Method of Machining Hypoid Gear Teeth by the Semi-Generating Method (Vysokoproizvoditel'naya obrabotka zub'yev gipoidnykh peredach poluobkatnym metodom).

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 2, pp 36-40 (USSR)

ABSTRACT: The author explains the theory of machining of hypoid gear teeth, starting with the basic formula of Ye. Vil'dgaber, and describes the production process of hypoid-gear drives for the "Volga" automobiles on (Gleason Nr 11) machines in the Gor'kiy Automobile Plant. There are 2 photos, 2 tables, and 8 diagrams.

ASSOCIATION: Gor'kovskiy avtozavod (Gor'kiy Automobile Plant)

Card 1/1

22(1) SOV/47-59-2-18/31

AUTHOR: Badayev, B.

TITLE: Useful Advice (Poleznyye sovety) Determining the Optical Strength of a Lens by Means of Sun Rays (Opredeleniye opticheskoy sily linzy s pomoshch'yu luchey Solntsa)

PERIODICAL: Fizika v shkole, 1959, Nr 2, p 70 (USSR)

ABSTRACT: In laboratory work the optical strength of lenses can be successfully determined by using parallel sun rays. One of the students holds the lens so as to produce the image of the sun on the screen (piece of cardboard) while another one measures several times the distance between the lens and the screen. The students then change their roles. The average value of the data obtained is taken to be the focal length of the lens. A pencil of parallel sun rays reflected from the mirror can be used for a projector or camera.

Card 1/2

Useful Advice. Determining the Optical Strength of a Lens by Means of Sun Rays.

The condenser in this case is not required in the camera.

ASSOCIATION: 5-ya srednyaya shkola, Yanshkala, Ashkhabadskoy oblasti (Secondary School Nr 5, Yanshkala, Ashkhabad Oblast)

Poisonous war gas and the principles of defense against it.
Izd 3.,perer. i dop. Leningrad, Khimteoret, 1938. 237 p. (50-52255)

UG447.B25 1938

BADAYEV, N.

So that people say, "Thank you." Zhil.-kom. khoz. 13 no.5: 25 My '63. (MIRA 16:8)

1. Direktor gostinitsy "Devon", g. Oktyabr'skiy.
(Oktyabr'skiy (Bashkiria)—Hotels, Taverns, ets.—Management)

BADAYEV, N.P.

New methods for servicing gas equipment of the city of Kiev. Gaz. prom.no.1:18-19 Ja '57. (MIRA 10:1)
(Kiev--Gas)

BADAYEV, N.P.

Institute on introduction of new equipment in the gas industry.
Gaz. prom. 6 no.9:34-37 '61. (MIRA 14:12)
(Ukraine--Gas distribution--Technological innovations)

BADAYEV, S.G.

Alternate operation of telephone and subscriber telegraph equipment on one telephone circuit. Vest. sviazi 17 no.12:12 D '57. (MIRA 10:12)

1. Glavnyy inzhener Voronezhskogo tsentral'nogo telegrafa.
(Telephone cables)

BADAYEV, S.G.

What gives birth to complaints. Vest. sviazi 22 no.4:18 Ap '62. (MIRA 15:4)

1. Nachal'nik Voronezhskogo telegrafa.
(Telecommunication--Employees)

BILETSKIY, S.M.; BADAYEV, S.N.

Double deformation of outsize cylindrical structures. Avtom. svar. 16 no.11:78-81 N '63. (MIRA 17:1)

1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR (for Biletskiy). 2. Stavropol'skiy zavod "Volgotsemtyazhmash" (for Badayev).

[illegible], O.S. (Moskva); [illegible], K.S. (Moskva); [illegible], V.C. (Moskva)

Effect of cyclic heat treatment on the irreversible shape changing of a VAD23 alloy sheet material. Izv. AN SSSR. Met. no.6:92-96 N-D '65. (MIRA 19:1)

1. Submitted July 29, 1965.

ACC NR: AT6036421 SOURCE CODE: UR/2536/66/000/066/0123/0127

AUTHOR: Bochvar, O S. (Doctor of technical sciences); Pokhodayev, K. S. (Candidate of technical sciences); Badayev, V. G. (Engineer)

ORG: none

TITLE: Cross section of the constitution diagram of the Al-Cu-Cd-Mn system with fixed Mn content at 500°C

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 66, 1966. Struktura i svoystva aviatsionnykh staley i splavov (Structure and properties of aircraft steels and alloys), 123-127

TOPIC TAGS: alloy phase diagram, quaternary alloy, aluminum base alloy, copper containing alloy, cadmium containing alloy, manganese containing alloy

ABSTRACT: The isothermal model of the four-component constitution diagram of the Al-Cu-Cd-Mn system (Fig. 1) represents a tetrahedron whose apices correspond to 100% content of the system's components and edges and sides represent isothermal sections of the corresponding two- and three-component systems. Alloys containing the same amount of Mn

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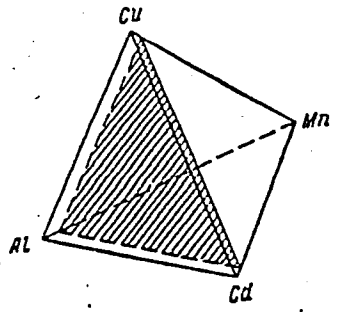

Fig. 1. Isothermal model of the constitutuion diagram of the Al-Cu--Cd-Mn system

correspond to the geometrical locus of points located within the tetrahedron and equidistant from the Al-Cu-Cd side. Such a geometrical locus is represented by a plane parallel to this side (In Fig. 1 this plane is indicated by the hatched area). The article deals with the phase competition and structure of alloys of the aluminum corner of the Al-Cu-Cd-Mn system at 500°C and given a fixed content of Mn (0.7%). Alloys containing up to 8.0% Cu and up to 0.5% Cd were investigated, on being prepared by adding Al-Cu and Al-Mn alloys and pure Cd to molten Al and casting this mixture into massive copper chill molds at 720°C, homogenizing

ACC NR: AT6036421

Electric conductivity $\lambda \frac{m}{ohm\text{-}mm^2}$ (1 gradation = $1 \frac{m}{ohm\text{-}mm^2}$

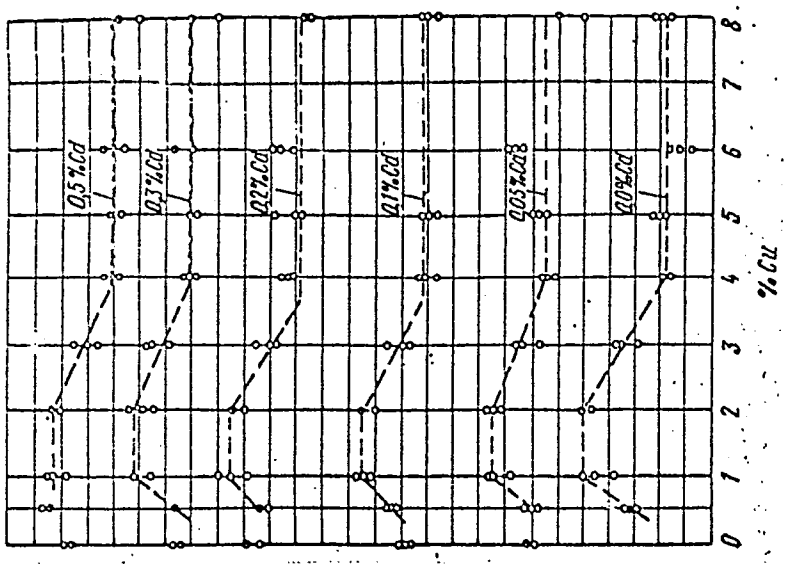

Fig. 2. Electric conductivity of alloys as a function of Cu content (all alloys contain 0.7% Mn)

Card 3/6

ACC NR: AT6036421

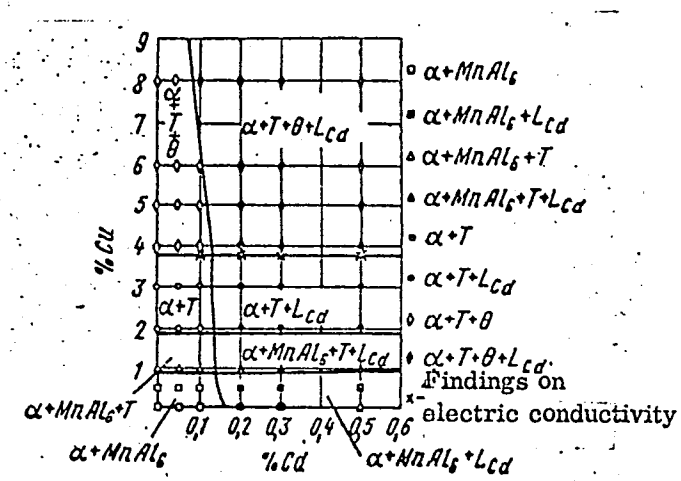

Fig. 3. Sectional diagram of the isothermal model of the constitution diagram of the Al-Cu-Cd-Mn system at 500°C and in the presence of a fixed Mn content (0.7%)

Card 4/6

ACC NR: AT6036421

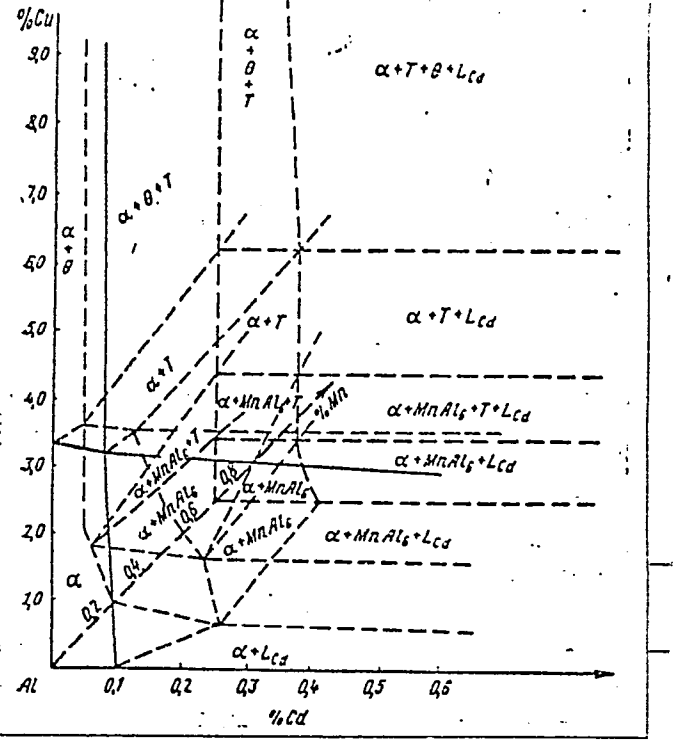

Fig. 4. Isothermal model of the Al corner of the Al-Cu-Cd-Mn constitution diagram at 500°C

Card 5/6

ACC NR: AT6036421

and hot-working the ingots and quenching them from 500°C in water, and subjecting specimen sections to metallographic and microstructural examination as well as to measurements of their electric conductivity. It was found that the solubility limit of Cd in Al in the presence of 0.7% Mn is 0.1-0.2% when the Cu content is up to 6.0%, and 0.05-0.1% when the Cu content is 8.0%. These findings are in good agreement with the findings on electric conductivity as a function of Cu content (Fig. 2), and the position of the phase regions in the sectional diagram of the isothermal model of the constitution diagram (Fig. 3) is in complete accord with Gibbs' law. On the basis of these findings and literature data the isothermal model of the aluminum corner of the constitution diagram of Al-Cu-Cd-Mn was plotted (Fig. 4): the spatial position of phase regions in this model also completely obeys Gibbs' law and is in agreement with literature data, and the sectional diagram plotted above (Fig. 2) is in satisfactory accord with the isothermal model of the system. Orig. art. has: 5 figures.

SUB CODE: // / SUBM DATE: none/ ORIG REF: 002/ OTH REF: 003

Card 6/6

ACC NR: AT6036422 SOURCE CODE: UR/2536/66/000/066/0128/0135

AUTHOR: Bochvar, O. S. (Doctor of technical sciences); Badayev, V. G. (Engineer)

ORG: none

TITLE: Change in the hardness of alloys of the Al-Cu-Cd-Mn-Li system as a function of composition and aging regime

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 66, 1966. Struktura i svoystva aviatsionnykh staley i splavov (Structure and properties of aircraft steels and alloys), 128-135

TOPIC TAGS: HARDNESS, COPPER CONTAINING ALLOY, CADMIUM CONTAINING ALLOY, metal aging, aluminum base alloy, manganese containing alloy, lithium containing alloy

ABSTRACT: Alloys of the Al-Cu-Cd-Mn-Li system have recently begun to come into wider use as the inclusion of Cd and Li in addition to the conventional components (Cu and Mn) increases the strength characteristics of these alloys and improves the stability of their properties at elevated temperatures. The addition of Cd, in particular, while ineffective with respect to the strength and elongation of alloys in annealed and freshly quenched state, markedly

Card 1/2 UDC: 669.017:669.71'3'862'74'884

enhances the effect of artificial aging (by more than 8-10 kg/mm^2). In this connection, the hardness of these alloys was investigated as a function of their composition and of the duration of artificial aging at 165°C. Alloys with the following chemical composition were investigated: 0.5 and 1.0% Mn, 0.1, 0.2 and 0.3% Cd; 4.0, 5.0 and 6.0% Cu, with Al as the remainder. In addition, two lithium-containing alloys (chemical composition: 0.5% Mn, 0.1% Cd, 5.0% Cu, 1.5 and 2.5% Li, with Al as the remainder) were investigated. The heat treatment of the alloys consisted in quenching in water from 535°C and artificial aging at 165°C for 4, 12, 16 and 20 hr. Hardness was measured once every 4 hr with the aid of a TSh machine under a load of 250 kg. Findings: the optimal hardening (Brinell hardness H_B 75 kg/mm^2) is accomplished by 16-hr aging at 165°C of the alloy containing 4% Cu, 0.2% Cd, 0.5% Mn, with Al as the remainder. Increasing the Cu content above 4%, the Cd content above 0.2% and the Mn content above 0.5% reduces the post-aging hardening to 22 kg/mm^2. Tests of the Li-containing alloys showed that the alloy containing 1.5% Li is more prone to softening (H_B 34 kg/mm^2 after 20 hr of aging) than the alloy containing 2.5% Li (H_B 53 kg/mm^2 after 20 hr of aging), which is in agreement with Silcock's conclusion (Silcock, J. M. J. of the Institute of Metals, 1959-1960, vol. 88(8), April) that a high Li content restricts the softening of alloys aged at 165°C. Orig. art. has: 6 figures, 2 tables.

SUB CODE: 11 / SUBM DATE: none/ ORIG REF: 001/ OTH REF: 004

L 42914-66 EWT(m)/T/EWP(t)/ETI IJP(c) JH/JD

ACC NR: AP6028588 SOURCE CODE: UR/0129/66/000/008/0035/0037

AUTHOR: Pokhodayev, K. S.; Badayev, V. G.

ORG: none

TITLE: Effect of thermal cycles on the dimensional stability of D16 alloy specimens

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1966, 35-37

TOPIC TAGS: aluminum alloy, ~~aluminum alloy dimensional stability~~, ~~cyclic~~ heat treatment/D16 alloy

ABSTRACT: D16T, D16T1, and D16TN alloy sheet specimens 100 x 35 x 3 mm, cut along and across the direction of rolling, were subjected to cyclic thermal treatment (CTT), heating to 150C in 60 sec followed by water quenching to room temperature and holding for 30 sec. Simultaneously, identical series of specimens were subjected to an equivalent treatment, aging at 150C with holding for a time equal to the total time of a certain number of cycles. The CTT of D16 alloy increased the length of longitudinal and transverse specimens. The equivalent treatment increased the length of longitudinal and decreased the length of transverse specimens. In D16T1 and D16TN, both types of treatment elongated the longitudinal specimens and shortened the transverse specimens. The effect was less pronounced than that in D16 alloy. Thus, CTT produces a change in the specimen dimensions, but the magnitude and sign of the change depend

Card 1/2 UDC: 669.71:621.78

L 42914-66

ACC NR: AP6028588

upon the initial state of the alloy and is different in naturally aged alloys and in artificially aged alloys. [ND]

SUB CODE: 13, 11/ SUBM DATE: none / ATD PRESS: 5069

Card 2/2 MLP

L 40330-66 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AP6014114 SOURCE CODE: UR/0370/65/000/006/0092/0096

AUTHORS: Bochvar, O. S. (Moscow); Pokhodayev, K. S. (Moscow); Badayev, V. G. (Moscow)

ORG: none

TITLE: Effects of cyclic heat loads on irreversible geometric changes of alloy VAD23 sheet metal

SOURCE: AN SSSR. Izvestiya. Metally, no. 6, 1965, 92-96

TOPIC TAGS: metal property, electric conductivity, specific volume, metal heat treatment, metal aging, sheet metal / VAD23 sheet metal

ABSTRACT: The changes in geometry, electric conductivity, and specific volume as a function of thermal cycling of alloy VAD23 sheet metal were investigated and compared with "equivalent" steady-state heat-treated specimens and with specimens which had been artificially aged before testing. The specimens (100 x 35 x 3.3 mm) were heated from 20 to 150C in 60 seconds, cooled in water to 20C, and kept at 20C for 30 seconds before recycling. "Equivalent" heat treatment consisted of keeping the specimens at 150C for the same period of time which they spent at 140--150C during the cyclic loading. It was found that the longitudinal and lateral deformations increased with the number of cycles, reaching a maximum of 78 and 36 μ

Card 1/2 UDC: 669.715

L 40330-66

ACC NR: AP6014114

respectively (8 and 9.5% elongation) after 2000 cycles and remaining constant thereafter. "Equivalent" heat treatment showed identical behavior but reached steady state after an "equivalent" 3000 cycles. The specific volume increased by a maximum of 0.248% after 2000 cycles and after an "equivalent" 1000 cycles. The electric conductivity continued increasing with number of cycles but increased faster for the "equivalent" treatment (a table is presented). It was found that artificial aging at 165C for 12 hours resulted in specimens which were unaffected by cyclic or "equivalent" heat treatment. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11, 13/ SUBM DATE: 29Jul65/ ORIG REF: 009/ OTH REF: 001

Card 2/2

L 01154-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5022005 UR/0286/65/000/014/0077/0077
678.742.2.002.2

AUTHOR: Mardykin, V. P.; Badayev, V. K.

TITLE: A method for producing polyethylene. Class 39, No. 172990

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 77

TOPIC TAGS: polyethylene, polymerization catalyst, organoaluminum compound, catalytic polymerization

ABSTRACT: This Author's Certificate introduces: 1. A method for producing polyethylene by polymerizing ethylene in a hydrocarbon solvent with heating in the presence of a catalyst. The catalyst used is the product of interaction of titanium tetrachloride with etherates of organoaluminum compounds. Catalyst consumption is reduced by using a diphenyl etherate of triethylaluminum and/or a diphenyl etherate of diethylaluminum bromide. 2. A modification of this method in which the diphenyl etherate of triphenylaluminum and/or the diphenyl etherate of diethylaluminum bromide are used in the form of naphtha solutions.

ASSOCIATION: none

SUBMITTED: 06Dec62 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 1/1

ACCESSION NR: AP4030358 S/0190/64/006/003/0444/0447

AUTHORS: Mardy*kin, V. P.; Badayev, V. K.

TITLE: Polymerization of ethylene over the catalytic system titanium tetrachloride-organoaluminum etherates

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 3, 1964, 444-447

TOPIC TAGS: ethylene, polymerization, ethylene polymerization, catalyst, titanium tetrachloride, organoaluminum etherate, ethyl phenyl ether, phenetole, polyethylene, triethylaluminum

ABSTRACT: The polymerization of ethylene was conducted at atmospheric pressure in a 350-ml glass reactor provided with a reflux condenser, a bubbling device, and a stirrer. The evacuated reactor was filled with ethylene. To it were added 200 ml n-heptane and 0.2 gm $TiCl_4$, followed by various quantities of triethylaluminum etherates I or II in octane. A temperature of 50C was kept throughout the polymerization process. Compounds I and II were both etherates of phenetole (composition $Al(C_2H_5)_2Br \cdot C_6H_5OC_2H_5$ and $Al(C_2H_5)_3 \cdot C_6H_5OC_2H_5$). The polyethylene obtained

Card 1/2

ACCESSION NR: AP4030358

was 80-90% crystalline, even though earlier authors claimed that only amorphous polymers could be produced from mono-olefins on alkylaluminum ethers. On the basis of a study of the yield and because of physical and mechanical properties of the polyethylene, the authors conclude that the activity of the organoaluminum etherate catalytic system is equal to that of systems which do not contain phenetole. Thanks are given to N. M. Chirkov for his advice. Orig. art. has: 1 table.

ASSOCIATION: Belorusskiy gosudarstvenny*y universitet im. V. I. Lenina, (Byelorussian State University); Nauchno-issledovatel'skiy institut polimerizatsionny*kh plastmass (Scientific Research Institute of Plastic Polymerization Materials)

SUBMITTED: 04Mar63 DATE ACQ: 07May64 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 005

Card 2/2

L 16508-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6001491 (A) SOURCE CODE: UR/0191/65/000/012/0006/0008

AUTHORS: Badayev, V. K.; Mardykin, V. P.; Arkhipova, Z. V.

ORG: none

TITLE: Polymerization of ethylene with organometallic catalysts modified by ethers

SOURCE: Plasticheskiye massy, no. 12, 1965, 6-8

TOPIC TAGS: polyethylene plastic, polymerization catalyst, aluminum compound, organoaluminum compound, intermolecular complex, ether

ABSTRACT: Polymerization of ethylene in the presence of alkyl aluminum-ether complexes as catalysts and according to the method discussed by the authors in an earlier work (Vysokomolek. soyed., 6, 444, 1964) is described. Organometallic component of the catalyst, $X(C_2H_5)_2Al{\cdot}O\begin{matrix}R'\\R''\end{matrix}$ (where X = halogen) was obtained by the action of ethyl bromide, dissolved in hydrocarbon, upon the mixture of crushed aluminum-magnesium (75:25) alloy with ethers. Ethylcyclohexyl and ethylphenyl ether complexes with triethylaluminum and ethylphenyl ether complex with

Card 1/2 UDC: 678.547.313.2:66.095.2

L 16508-66

ACC NR: AP6001491

diethylaluminum bromide (I) were synthesized and used in catalytic systems in conjunction with $TiCl_4$. Polyethylene obtained in the presence of I and $TiCl_4$ possessed satisfactory mechanical properties, high density (0.95-0.97 g/cc), molecular weight, and toughness. Orig. art. has: 3 tables and 2 structures.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 008

Card 2/2 SM

L 27998-66 EWP(j)/EWT(m)/T RM

ACC NR: AP6009874 (A) SOURCE CODE: UR/0413/66/000/004/0069/0069

INVENTOR: Savitskiy, A. V.; Skachilova, S. Ya.; Neugodov, P. P.; Ratushenko, G. V.; Arkhipova, Z. V.; Falev, V. M.; Badayev, V. K.

ORG: none

TITLE: Preparation of polyolefins. Class 39, No. 178982. [announced by State Scientific-Research Institute of Polymerization Plastics, Experimental Plant (Gosudarstvennyy nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass, eksperimental'nyy zavod); Central Scientific-Research Laboratory of Reagents (Tsentral'naya nauchno-issledovatel'skaya laboratoriya reaktivov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 69

TOPIC TAGS: olefin, polymerization, polymer

ABSTRACT: An Author Certificate has been issued describing a method of obtaining polyolefins by polymerization of Alpha-olefins in a medium of an inert hydrocarbon solvent with heating in the presence of a catalyst consisting of a mixture of dialkylaluminum chloride and a heavy metal compound. To speed up the process of polymerization and expand the variety of heavy metal compounds, chelate derivatives of orthovanadic acid are suggested under the general formula $VO(OR)(OX)_2$, where R is the hydrogen or alkyl and X is the remainder of the chelating agent. Methylether of vanadium orthohydroxyquindate is the chelate derivative of orthovanadic acid suggested for use.

SUB CODE: 07,11/ SUBM DATE: 13Aug64

UDC: 678.742

Card 1/1 [LD]

BADEYEV, Yu.S.; Prinimala uchastiye Lopaten', V.V., studentka

Some characteristics of the movement of solids in heavy suspensions. Obog. rud 5 no.6:14-19 '60. (MIRA 14:8)

1. Leningradskiy gornyy institut (for Lopaten').
(Suspensions (Chenistry)--Density)

BADAYEVA, Anna Antonovna

Gulyayev, A.P., Gradov, P. P., and Badayeva, A.A., "The cold Working of Tools of High-Speed Steel," Stanki i Instrument 1949, No 4, p. 16-18, (Conclusion begining No 3,)

SO: U-3736, 21 May 53 (Letopis 'Zhurnal'nykh Statey, No 18, 1949)
SO: U-3368 24 Apr 1953

BADAEVA, A. A.; GULYAEV, A. P.; GRUDOV, P. P.

"Subzero Treatment of High-Speed-Steel Tools," Stanki i Instrument 20 (1949) No 3, pp 3/6; No 4, pp 16/18.

B-77406, 21 Jul 54

MALININA, K.A.; SMOL'NIKOV, Ye.A.; SUYETOV, A.P.; BADAYEVA, A.A.; LUNEVA, Z.S.; KUKOLEV, V.V.; SOKOLOVSKAYA, V.V.; LEBEDEVA, Ye.A.; UVAROVA, A.F., tekhn.red.

[Technological operations in the manufacture of metal-cutting tools; instructions] Tekhnologiia izgotovleniia metallorezhushchikh instrumentov; rukovodiashchie materialy. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry. No.7. [Heat treatment] Termicheskaia obrabotka. 1960. 127 p.
(MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut. 2. Termicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instrumental'nogo instituta (for all, except Uvarova).
(Metal-cutting tools) (Metals--Heat treatment)

18.1120

88369
S/129/61/000/001/011/013
E193/E183

AUTHORS: Nadeyinskaya, Ye.P., Doctor of Technical Sciences, Professor; and Badayeva, A.A., Engineer

TITLE: The Effect of the Mode of Heat Treatment on Hardness and Wear of High Speed Cutting Steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No. 1, pp. 57-61

TEXT: Using the radioactive tracer technique, the authors studied the wear of cutting tools, made of steels P 9 (R9) and P 18 (R 18) as a function of the hardening temperature, tempering temperature, hardness, the properties of the metal machined, and the machining conditions. The following conclusions were reached: 1) Optimum wear-resistance in steels studied is obtained after quenching from 1290 °C (steel R 18), or 1260 °C (steel R9) and tempering at 540-560 °C. 2) The higher the cutting speed, the narrower is the optimum quenching and temperature range. 3) The wear-resistance of a tool cannot be assessed by its hardness alone. The rate of wear of steel R 9, tempered at 100 °C to H_{RC} = 64 and tested at a cutting speed of

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88369

S/129/61/000/001/011/013
E193/E183

The Effect of the Mode of Heat Treatment on Hardness and Wear of High Speed Cutting Steel

50 m/sec, was approximately 100% higher than that of the same steel tempered at 560 °C to the same hardness. 4) The optimum hardness of the tool varies between 61 and 65 H_{RC}, depending on the type of the machining operation, cutting speed employed, and properties of the metal machined.
There are 6 figures.

Card 2/2

S/137/62/000/002/094/1[illegible]
A060/A101

AUTHOR: Badayeva, A. A.

TITLE: Determining the decarbonization in steel Х 6ВФ (Kh6VF) from the temperature of martensitic transformation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 71, abstract 21477 (V sb. "Metodika i praktika metallogr. issled. instrum. stali". Moscow, Mashgiz, 1961, 56-59)

TEXT: Experiments are described and methods are proposed for determining a heat-treatment schedule which will result in a most clearly expressed structure of the decarbonized layer in steel (1% C, 6% Cr, 1.3% W, and 0.6% V). Polished sections were prepared after the heat-treatment and were examined at a magnification of 100 and 200 times. It is indicated that the decarbonized layer is most pronounced when the steel is heated up to temperatures at which the solid solution approaches the limiting saturation with alloying elements. The following schedule for treating specimens of steel Kh6VF to find the carbonized layer is recommended: heating up in a barium chloride salt vat up to 1,100°C, the time of holding the specimen in the vat is computed on the basis of the norm

Card 1/2

Determining the decarbonization ...

of 16 - 20 sec/mm of specimen thickness. The vat should be reduced with borax. The cooling of the specimen from 1,100°C is carried out in an oil vat down to 100 - 110°C for 10 min. Then the specimen is transferred to a saltpeter vat with temperature 530 - 540°C, where it is soaked for 10 min and then cooled in air. The comparison of the data obtained with the results of X-ray structure analysis as to the carbon content in the martensite has shown a good agreement.

Z. Fridman

[Abstracter's note: Complete translation]

Card 2/2

ACC NR: AP6035884 SOURCE CODE: UR/0413/66/000/020/0124/0124

INVENTOR: Badayeva, A. A.; Pervaya, A. S.; Tutov, I. Ye.; Katsnel'son, V. Yu.; Kuz'mintsev, V. N.; Koloskov, M. M.; Kulinich, V. P.

ORG: none

TITLE: High speed steel. Class 40, No. 187314 [announced by the Central Scientific Research Institute of Technology and Machine Building (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya); All-Union Scientific Research Tool Institute (Vsesoyuznyy nauchno-issledovatel'skiy instumental'nyy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 124

TOPIC TAGS: high speed steel, chromium tungsten molybdenum steel, vanadium containing steel, titanium containing steel, DUCTILITY, TOUGHNESS

ABSTRACT: This Author Certificate introduces a high-speed steel containing silicon, manganese, chromium, tungsten, molybdenum, vanacium and titanium. To improve the strength, ductility, notch toughness, and oxidation and heat resistance and to reduce carbide heterogeneity, the steel composition is set as follows: 0.75—0.85% carbon, 0.17—0.35% silicon, 0.20—0.40% manganese, 3.5—4.5% chromium, 2.5—3.0% tungsten, 2.5—3.0% molybdenum, 1.9—2.2% vanadium, 0.03—0.08% titanium.

SUB CODE: 11/ SUBM DATE: 05Jun65/

Card 1/1 UDC: 669.14.018.252.3

ACC NR: AP7005640 (N) SOURCE CODE: UR/0413/67/000/002/0091/0092

INVENTOR: Badayeva, A. A.; Yaunzen, L. I.

ORG: None

TITLE: Tool steel. Class 40, No. 190587 [announced by the All-Union Scientific Research Institute of Cutting Tools (Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 91-92

TOPIC TAGS: tool steel, chromium steel, tungsten steel, molybdenum steel, vanadium steel

ABSTRACT: This Author's Certificate introduces a grade of tool steel which contains chromium, tungsten, molybdenum and vanadium. The mechanical properties of the material are improved by using the following composition (in %): carbon--0.45-0.55, manganese--less than 0.45, silicon--less than 0.35, sulfur--less than 0.03, phosphorus--less than 0.03, nickel--less than 0.4, chromium--5.5-7.0, tungsten--1.1-1.5, molybdenum--0.6-0.9 and vanadium--0.5-0.7.

SUB CODE: 11/ SUBM DATE: 18Feb65

Card 1/1 UDC: 669.14.018.25:669.15'26'27'28'292-194

S/137/62/000/003/140/191
A052/A101

AUTHORS: Malinkina, Ye. I., Badayeva, A. S.

TITLE: The method of chemical and electrolytic etching

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 66, abstract 31429 ("Metodika i praktika metallogr. issled. instrum. stali.", Moscow Mashgiz, 1961, 20-35)

TEXT: To detect martensite and residual austenite in hardened untempered steel, 3 reagents were selected after having been tested on P 9 (R9) and P 18 (R18) high-speed steel. It has been found out that martensite is detected most completely by the reagent of the following composition: 5ml hydrochloric acid, 1 g picric acid, 95 ml ethyl alcohol. The regions containing residual austenite are determined by the magneto-metallographic method. To detect the grain boundaries in hardened R18 steel a number of reagents have been tried. Three reagents have been selected; as the most successful has been proved a 10% hydrochloric acid solution used for electrolytic etching. To separate carbides observed under microscope, the authors have chosen the method of chemical etching of carbides with the differently coloring reagents. It has been

Card 1/2

S/137/62/000/003/140/191
A052/A101

The method of chemical and electrolytic etching

established that the only reagent coloring carbon steel carbides is Na picrate (Fe_3C is colored dark brown). On the other hand the effect of the alcohol solution of nitric acid or of the electrolytic etching in 1% chromic acid consists in detecting just the boundaries of carbides. The detection of trigonal carbides Cr_7C_3 by etching in adopted reagents was carried out on X 12 M(Kh12M) steel samples. $(Fe, Cr)_7C_3$ carbides are colored bright orange when etched in the reagent with potassium ferricyanide and bright yellow when etched with potassium permanganate. The etchability of Fe_3W_3C carbides was tested on R18 steel; these carbides are colored dark brown when etched with Na picrate, the reagent with potassium ferricyanide or potassium permanganate. The effect of the reagents on VC carbides was investigated on P 9Φ5 (R9F5) steel. These carbides are colored black only at electrolytic etching in chromic acid. There are 9 references.

G. Tolmacheva

[Abstracter's note: Complete translation]

Card 2/2

SMOL'NIKOV, Ye.A., kand.tekhn.nauk; BADAYEVA, A.S., inzh.

Nonmetallic inclusions in high-speed steel. Metalloved. i term. obr. met. no.6:48-50 Je '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut.
(Tool steel—Inclusions)

BADAYEVA, A. V.

"Geometric Isometry of Complex Compounds and the Spectrum of Absorption of Their Solutions in the Ultraviolet Zone," Izv. Sekt. plat. i blag. met., No.25, 1950.

KUL'CHUTSKIY, K.I., doktor med. nauk; LUR'YE-POKROVSKAYA, T.A., kand. med. nauk; BADAYEVA, L.N.

Neural apparatus of the heart in endocarditis in man and under experimental conditions. Vrach. delo no.10:32-36 O '63. (MIRA 17:2)

1. Kiyevskiy meditsinskiy institut.

BAGRYANTSEVA, P. P., BADAYEVA, M. K. and KAYGORODTSEVA, R. A.

"The Protection of Hydraulic Gas Containers from Corrosion," p. 189.

in book Study and Use of Petroleum Products, Moscow, Gosteptekhizdat, 1957. 213 pp.

This collection of articles gives the results of the sci. res. work of the AU Sci. Res. Inst. for the Processing of Petroleum and Gas for the Production of Synthetic Liquid Fuel.

БАДАЕВА, М.К.

BAGRYANTSEVA, P.P.; BADAYEVA, M.K.; KAYGORODTSEVA, R.A.

Corrosion protection of water gasholders. Trudy VNII NP no.6:189-198 '57. (MIRA 10:10)

(Gasholders) (Corrosion and anticorrosives)

К НИАХЕЦИЯ

BAGRYANTSEVA, P.P.; BADAYEVA, M.K.

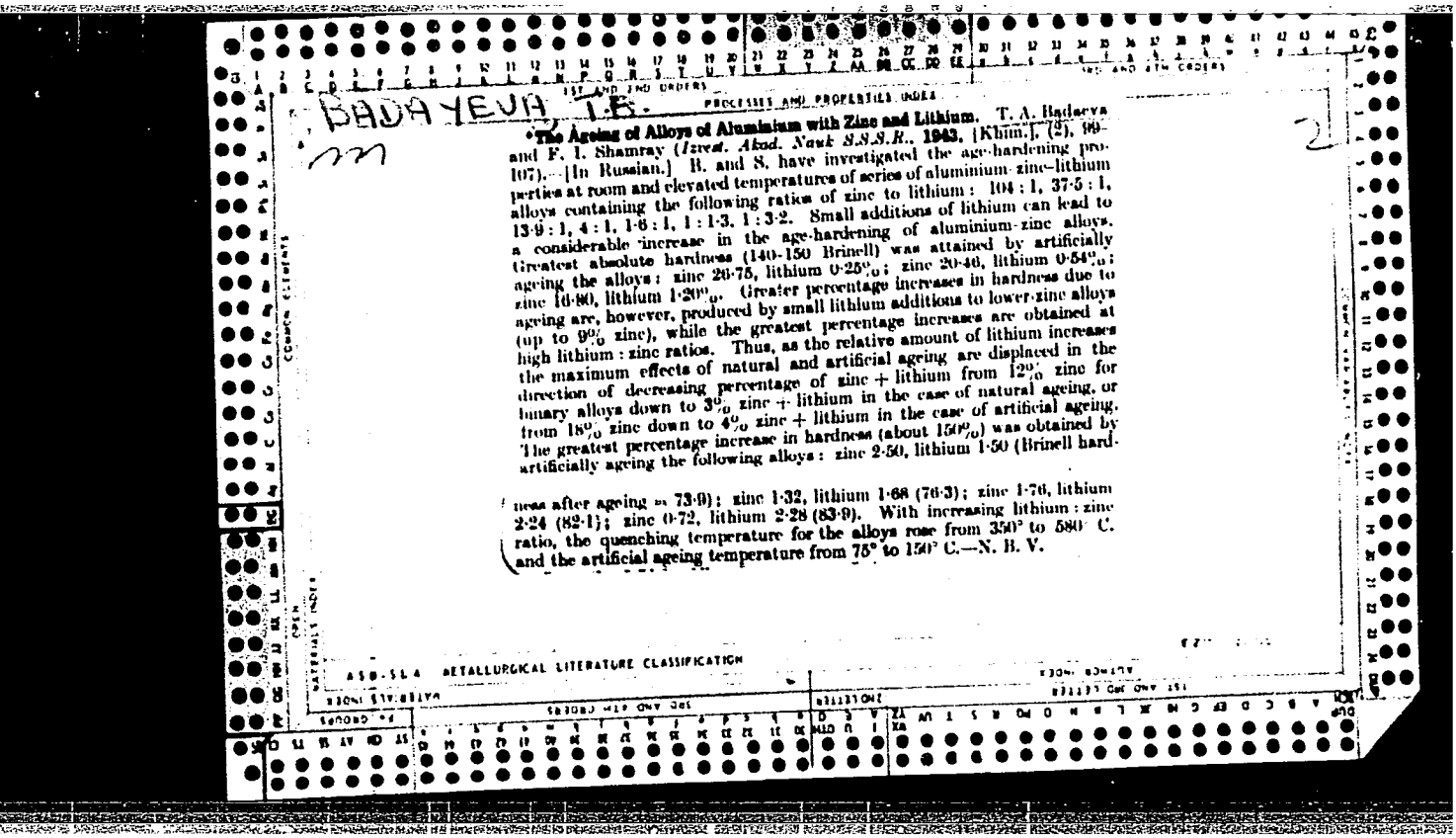
Effect of volatility and viscosity of mineral oils on the industrial properties of cold-resistant greases. Trudy VNII NP no.6:206-218 '57. (MIRA 10:10)
(Mineral oils) (Lubrication and lubricants)

BADAYEVA, O.N., Cand Tech Sci--(diss) " Study of metallic films as ~~in their capacity~~ heat resistance ~~quality of the~~ measurement of ~~the in-~~ ~~creased precision power~~ in the short-wave ~~part~~ of the centimeter ~~diapason~~ of waves." [Mos], 1958. 11 pp (State Committee of the Council of Ministers USSR on Radioelectronics. State ~~Allied~~ Union Sci Res Inst), 120 copies (KL,25-58, 111)

BADAYEVA, P. K.

BADAYEVA, P. K. "Flax Diseases in Siberia,"Bolezni Rastenii, Vestnik Otdela Fitopatalogii Glavnogo Botanicheskogo Sada SSSR, 1930, pp. 192-199. 464.826

SO: SIRA, SI 90-53, 15 Dec. 1953

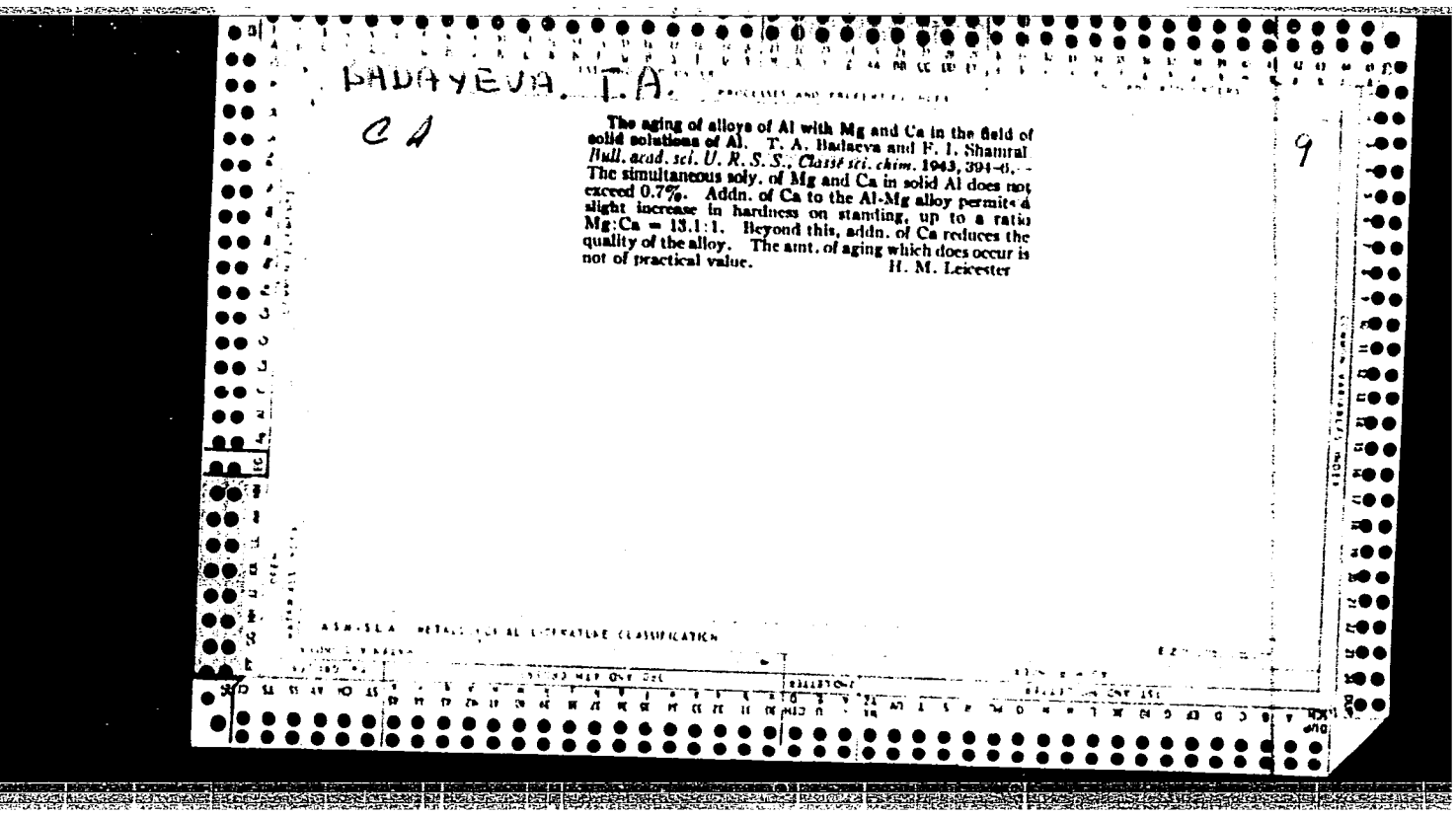


BADAYEVA, T.B.

PROCESSES AND PROPERTIES INDEX

The Ageing of Alloys of Aluminium with Zinc and Lithium. T. A. Badayeva and F. I. Shamray (*Izvest. Akad. Nauk S.S.S.R.*, 1943, [Khim.], (2), 99–107).—[In Russian.] B. and S. have investigated the age-hardening properties at room and elevated temperatures of series of aluminium–zinc–lithium alloys containing the following ratios of zinc to lithium: 104 : 1, 37·5 : 1, 13·9 : 1, 4 : 1, 1·6 : 1, 1 : 1·3, 1 : 3·2. Small additions of lithium can lead to a considerable increase in the age-hardening of aluminium–zinc alloys. Greatest absolute hardness (140–150 Brinell) was attained by artificially ageing the alloys: zinc 20·75, lithium 0·25%; zinc 20·46, lithium 0·54%; zinc 10·80, lithium 1·20%. Greater percentage increases in hardness due to ageing are, however, produced by small lithium additions to lower-zinc alloys (up to 9% zinc), while the greatest percentage increases are obtained at high lithium : zinc ratios. Thus, as the relative amount of lithium increases the maximum effects of natural and artificial ageing are displaced in the direction of decreasing percentage of zinc + lithium from 12% zinc for binary alloys down to 3% zinc + lithium in the case of natural ageing, or from 18% zinc down to 4% zinc + lithium in the case of artificial ageing. The greatest percentage increase in hardness (about 150%) was obtained by artificially ageing the following alloys: zinc 2·50, lithium 1·50 (Brinell hardness after ageing = 73·9); zinc 1·32, lithium 1·68 (76·3); zinc 1·76, lithium 2·24 (82·1); zinc 0·72, lithium 2·28 (83·9). With increasing lithium : zinc ratio, the quenching temperature for the alloys rose from 350° to 580° C. and the artificial ageing temperature from 75° to 150° C.—N. B. V.

A58-SL4 METALLURGICAL LITERATURE CLASSIFICATION

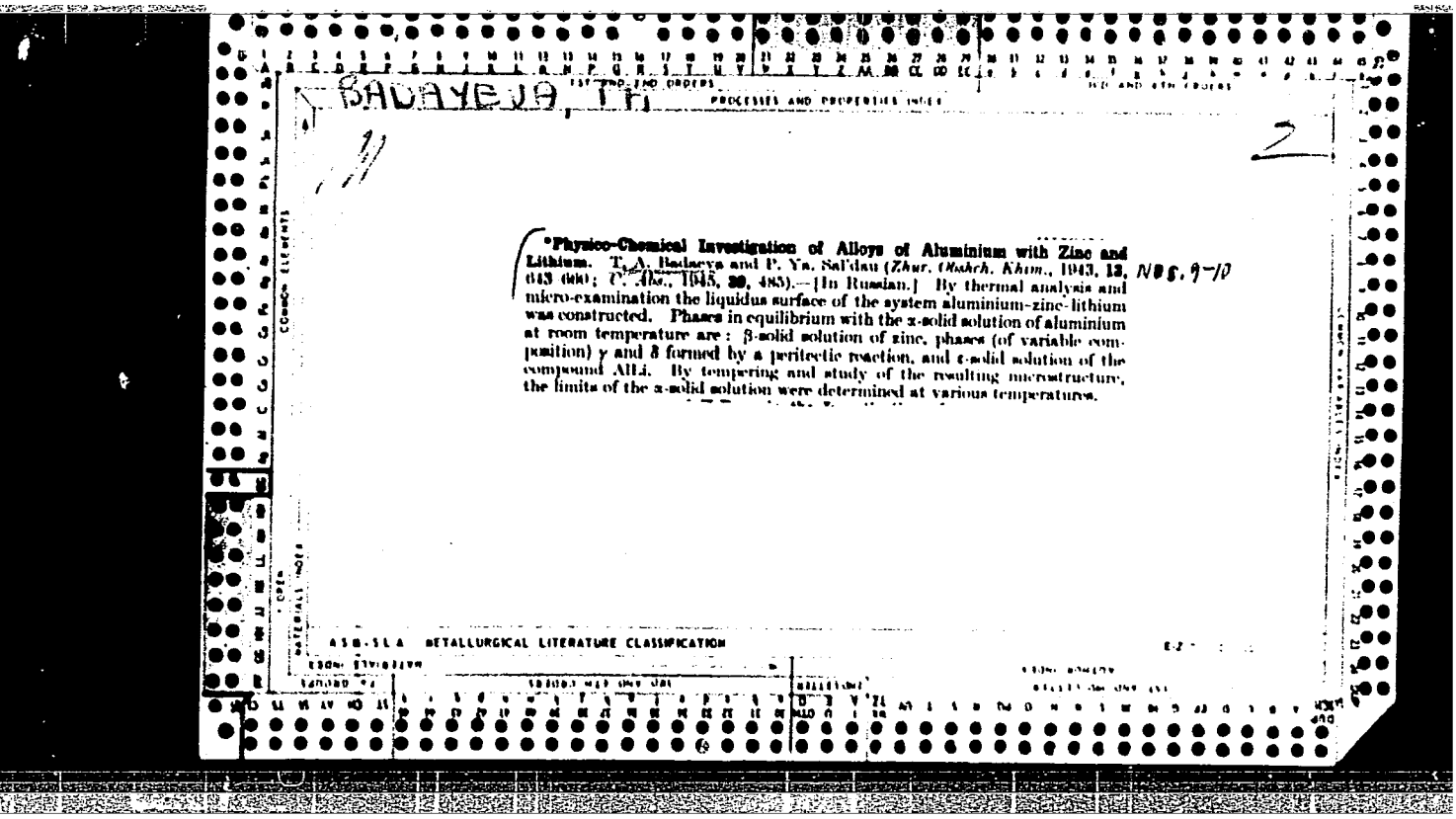


BADAYEVA, T. A.

CA

9

The aging of alloys of Al with Mg and Ca in the field of solid solutions of Al. T. A. Badaeva and F. I. Shamral *Bull. acad. sci. U. R. S. S., Classe sci. chim.* 1943, 391–6. — The simultaneous soly. of Mg and Ca in solid Al does not exceed 0.7%. Addn. of Ca to the Al-Mg alloy permits a slight increase in hardness on standing, up to a ratio Mg:Ca = 13.1:1. Beyond this, addn. of Ca reduces the quality of the alloy. The amt. of aging which does occur is not of practical value.
H. M. Leicester



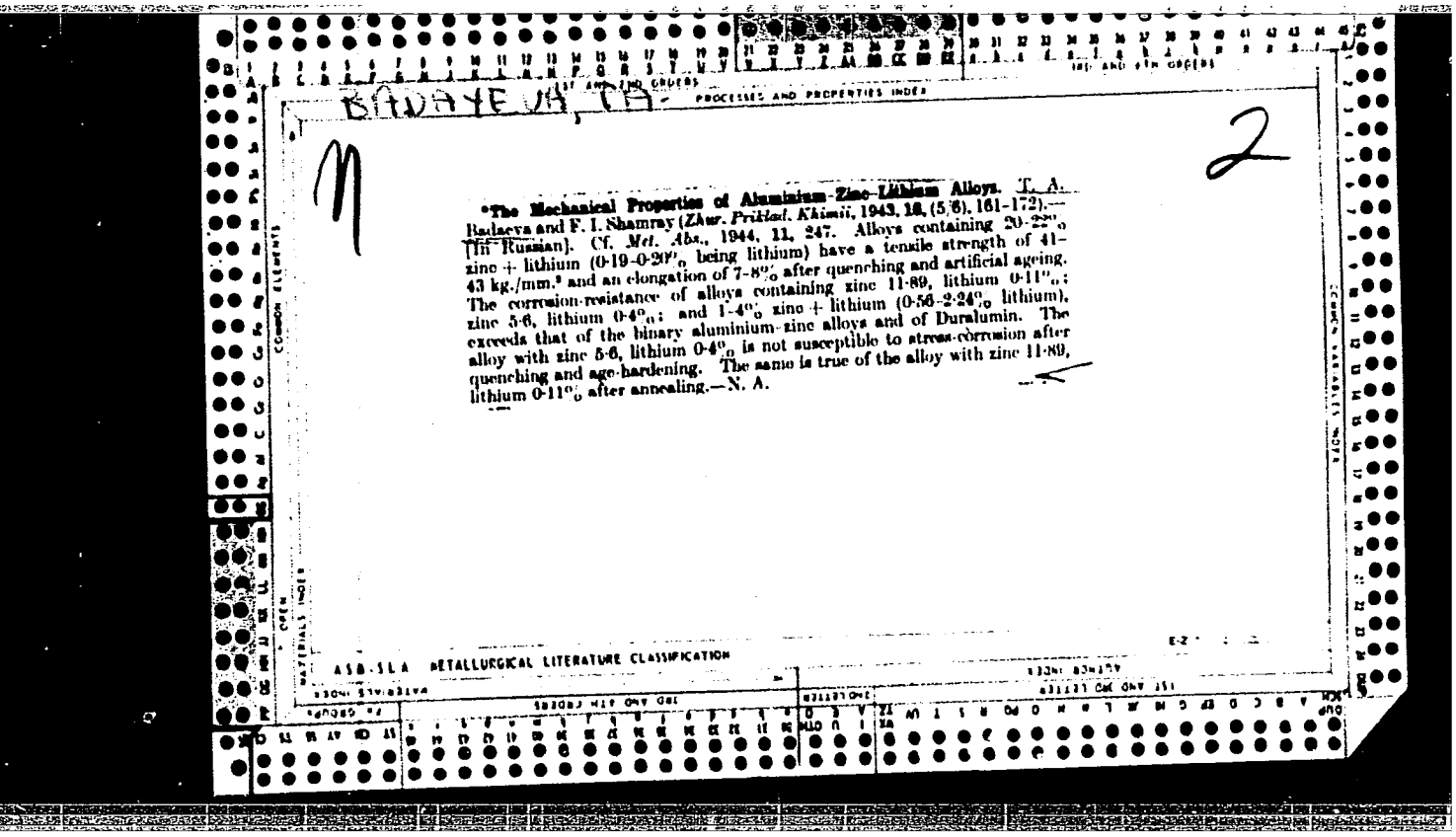
BADAYEVA, T.A.

2

*Physico-Chemical Investigation of Alloys of Aluminium with Zinc and Lithium. T. A. Badaeva and P. Ya. Sal'dau (*Zhur. Obshch. Khim.*, 1943, **13**, 643 (600); *C. Abs.*, 1945, **39**, 485).—[In Russian.] By thermal analysis and micro-examination the liquidus surface of the system aluminium–zinc–lithium was constructed. Phases in equilibrium with the α-solid solution of aluminium at room temperature are: β-solid solution of zinc, phases (of variable composition) γ and δ formed by a peritectic reaction, and ε-solid solution of the compound AlLi. By tempering and study of the resulting microstructure, the limits of the α-solid solution were determined at various temperatures.

NDS, 9-10

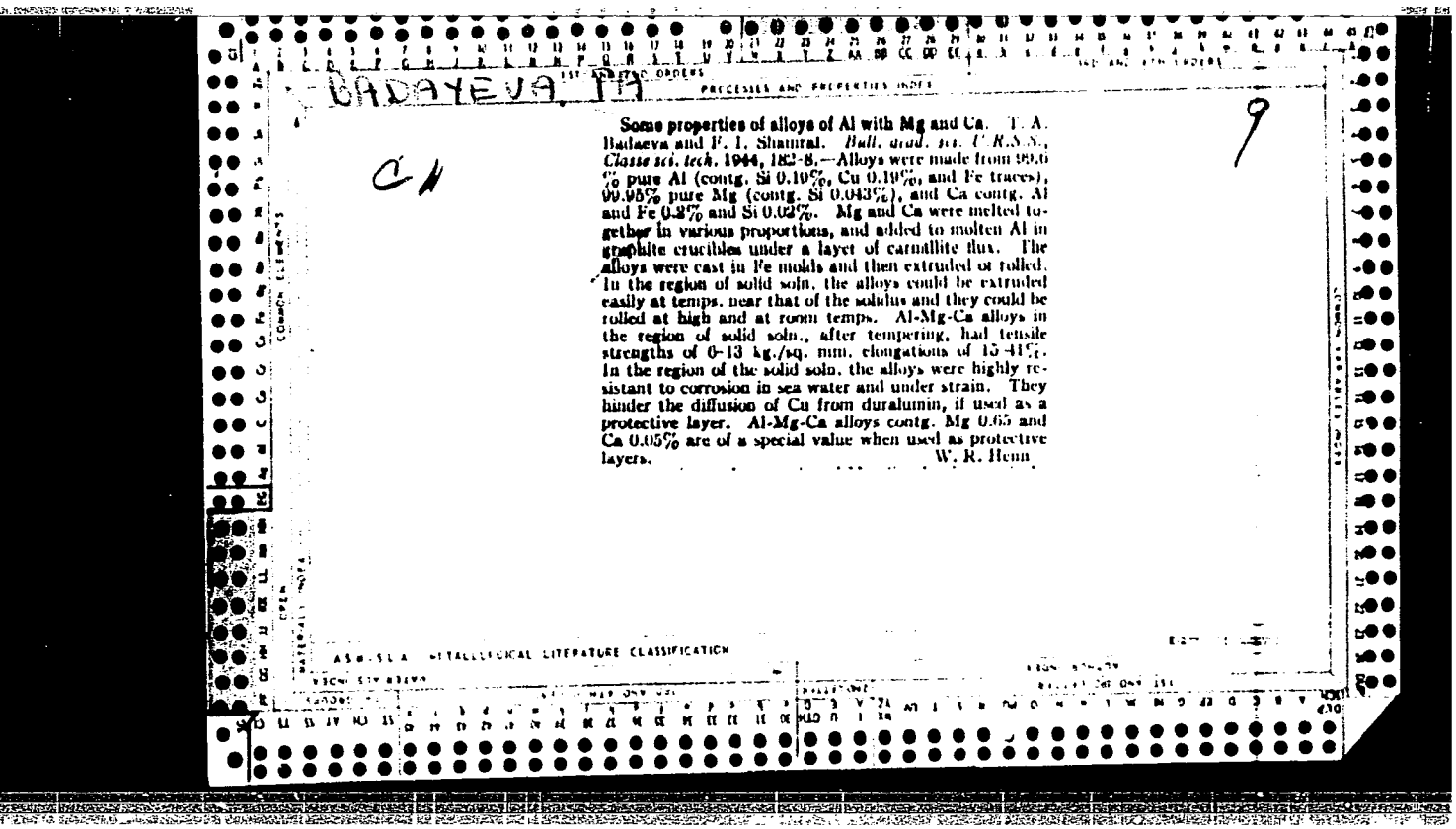
A58-51A METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

***The Mechanical Properties of Aluminium-Zinc-Lithium Alloys.** T. A. Badaeva and F. I. Shamray (*Zhur. Prikład. Khimii*, 1943, 16, (5/6), 161-172).—[In Russian]. Cf. *Met. Abs.*, 1944, 11, 247. Alloys containing 20-22% zinc + lithium (0·19-0·20% being lithium) have a tensile strength of 41-43 kg./mm.^{2} and an elongation of 7-8% after quenching and artificial ageing. The corrosion-resistance of alloys containing zinc 11·89, lithium 0·11%; zinc 5·6, lithium 0·4%; and 1-4% zinc + lithium (0·56-2·24% lithium), exceeds that of the binary aluminium-zinc alloys and of Duralumin. The alloy with zinc 5·6, lithium 0·4% is not susceptible to stress-corrosion after quenching and age-hardening. The same is true of the alloy with zinc 11·89, lithium 0·11% after annealing.—N. A.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

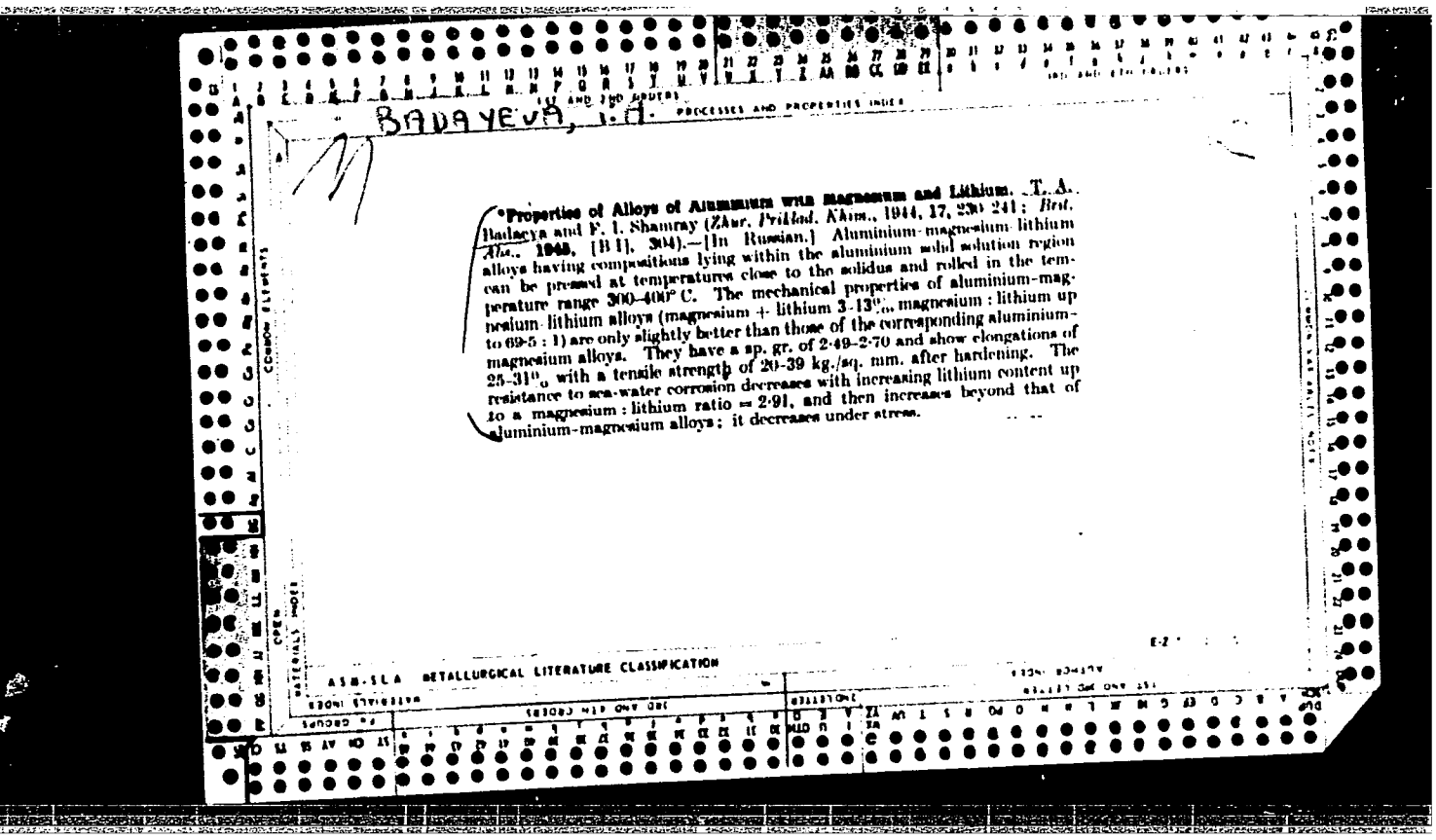


BADAYEVA, T.A.

C-11

9

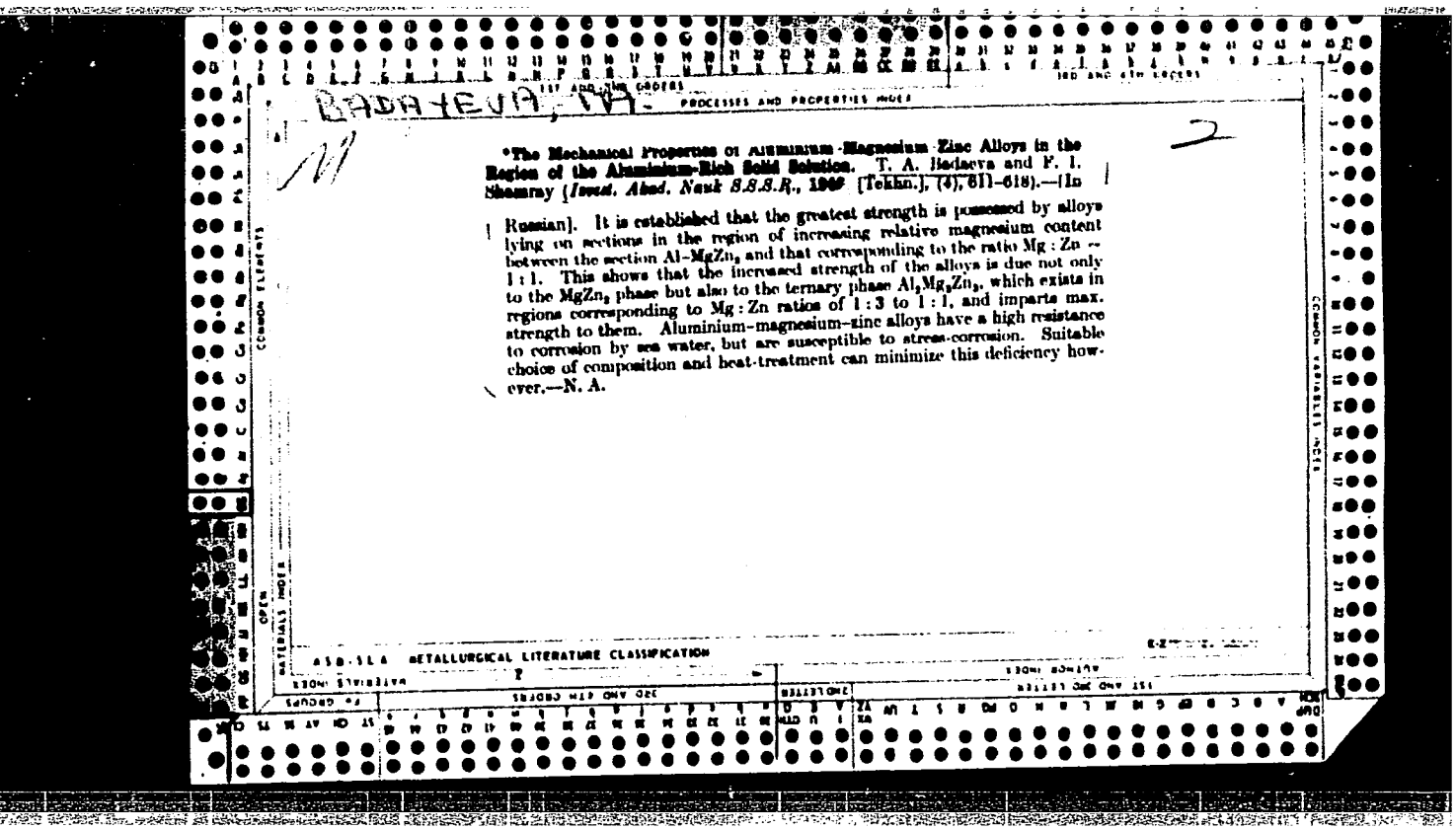
Some properties of alloys of Al with Mg and Ca. T. A. Badaeva and F. I. Shamrai. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1944, 182-8.—Alloys were made from 99.6% pure Al (contg. Si 0.10%, Cu 0.10%, and Fe traces), 99.95% pure Mg (contg. Si 0.043%), and Ca contg. Al and Fe 0.2% and Si 0.02%. Mg and Ca were melted together in various proportions, and added to molten Al in graphite crucibles under a layer of carnallite flux. The alloys were cast in Fe molds and then extruded or rolled. In the region of solid soln. the alloys could be extruded easily at temps. near that of the solidus and they could be rolled at high and at room temps. Al-Mg-Ca alloys in the region of solid soln., after tempering, had tensile strengths of 6-13 kg./sq. mm. elongations of 15-41%. In the region of the solid soln. the alloys were highly resistant to corrosion in sea water and under strain. They hinder the diffusion of Cu from duralumin, if used as a protective layer. Al-Mg-Ca alloys contg. Mg 0.65 and Ca 0.05% are of a special value when used as protective layers. W. R. Henn



BADAYEVA, L. A.

***Properties of Alloys of Aluminium with Magnesium and Lithium.** T. A. Badayeva and F. I. Shamray (*Zhur. Prikład. Khim.*, 1944, 17, 230–241; *Brit. Abs.*, **1945**, [B II], 304).—[In Russian.] Aluminium-magnesium-lithium alloys having compositions lying within the aluminium solid solution region can be pressed at temperatures close to the solidus and rolled in the temperature range 300–400° C. The mechanical properties of aluminium-magnesium-lithium alloys (magnesium + lithium 3–13%, magnesium : lithium up to 69·5 : 1) are only slightly better than those of the corresponding aluminium-magnesium alloys. They have a sp. gr. of 2·49–2·70 and show elongations of 25–31% with a tensile strength of 20–39 kg./sq. mm. after hardening. The resistance to sea-water corrosion decreases with increasing lithium content up to a magnesium : lithium ratio = 2·91, and then increases beyond that of aluminium-magnesium alloys; it decreases under stress.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



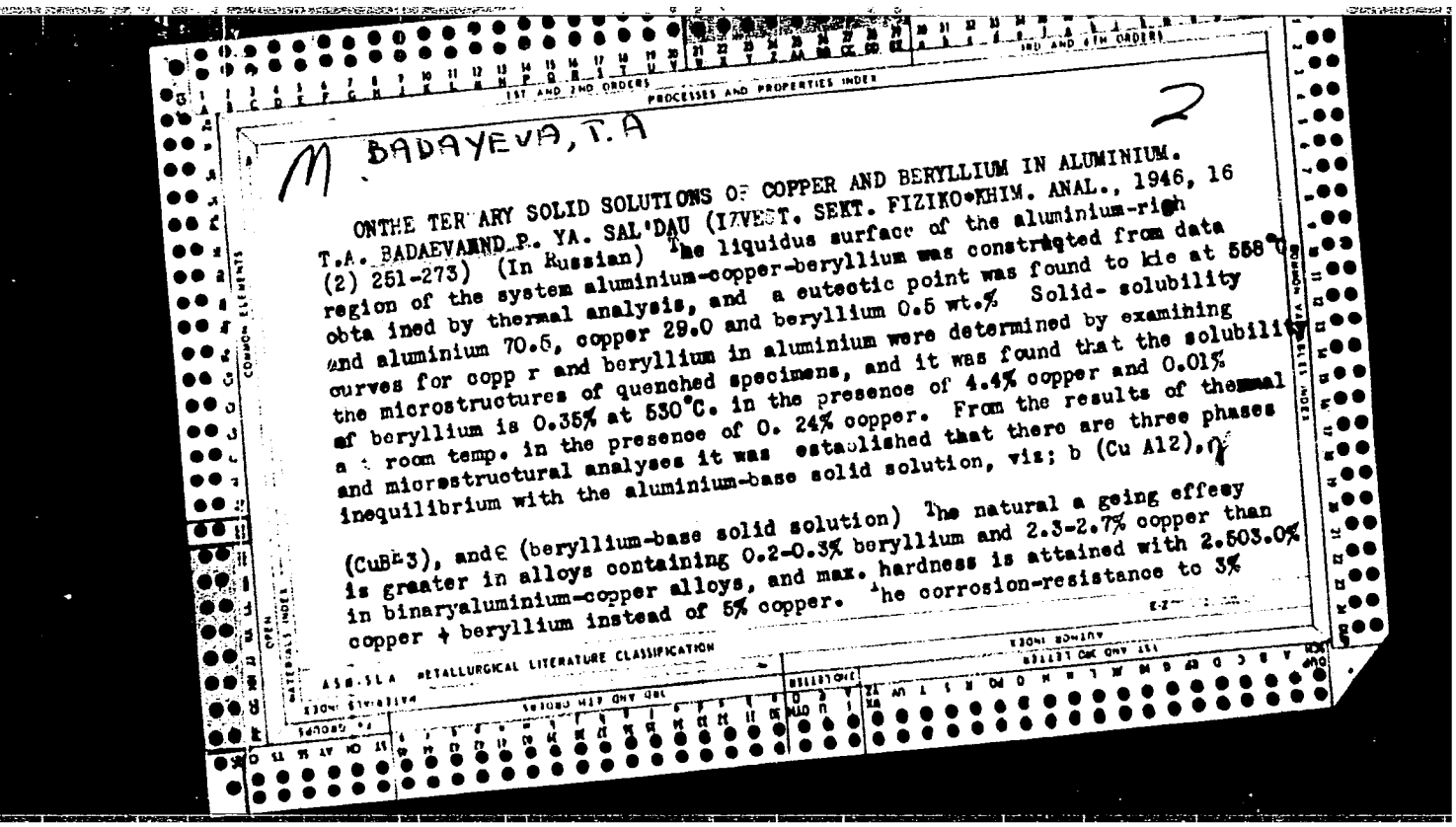
BADAYEVA, T.A.

PROCESSES AND PROPERTIES INDEX

2

*The Mechanical Properties of Aluminium-Magnesium-Zinc Alloys in the Region of the Aluminium-Rich Solid Solution. T. A. Badaeva and F. I. Shamray (*Izvest. Akad. Nauk S.S.S.R.*, 1956 [Tekhn.], (4), 611–618).—[In Russian]. It is established that the greatest strength is possessed by alloys lying on sections in the region of increasing relative magnesium content between the section Al–$MgZn_2$ and that corresponding to the ratio Mg : Zn = 1 : 1. This shows that the increased strength of the alloys is due not only to the $MgZn_2$ phase but also to the ternary phase $Al_2Mg_3Zn_3$, which exists in regions corresponding to Mg : Zn ratios of 1 : 3 to 1 : 1, and imparts max. strength to them. Aluminium–magnesium–zinc alloys have a high resistance to corrosion by sea water, but are susceptible to stress-corrosion. Suitable choice of composition and heat-treatment can minimize this deficiency however.—N. A.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



M BADAYEVA, T.A 2

ONTHE TER ARY SOLID SOLUTIONS OF COPPER AND BERYLLIUM IN ALUMINIUM.
T.A. BADAEVAAND P. YA. SAL'DAU (IZVEST. SEKT. FIZIKO-KHIM. ANAL., 1946, 16
(2) 251-273) (In Russian) The liquidus surface of the aluminium-rich
region of the system aluminium-copper-beryllium was constructed from data
obta ined by thermal analysis, and a eutectic point was found to lie at 558°C
and aluminium 70.6, copper 29.0 and beryllium 0.5 wt.% Solid- solubility
curves for copp r and beryllium in aluminium were determined by examining
the microstructures of quenched specimens, and it was found that the solubili
of beryllium is 0.35% at 530°C. in the presence of 4.4% copper and 0.01%
a t room temp. in the presence of 0. 24% copper. From the results of thermal
and microstructural analyses it was established that there are three phases
inequilibrium with the aluminium-base solid solution, viz; b (Cu Al2), ζ
(CuBe3), and ε (beryllium-base solid solution) The natural a geing effect
is greater in alloys containing 0.2-0.3% beryllium and 2.3-2.7% copper than
in binaryaluminium-copper alloys, and max. hardness is attained with 2.5-3.0%
copper + beryllium instead of 5% copper. The corrosion-resistance to 3%

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

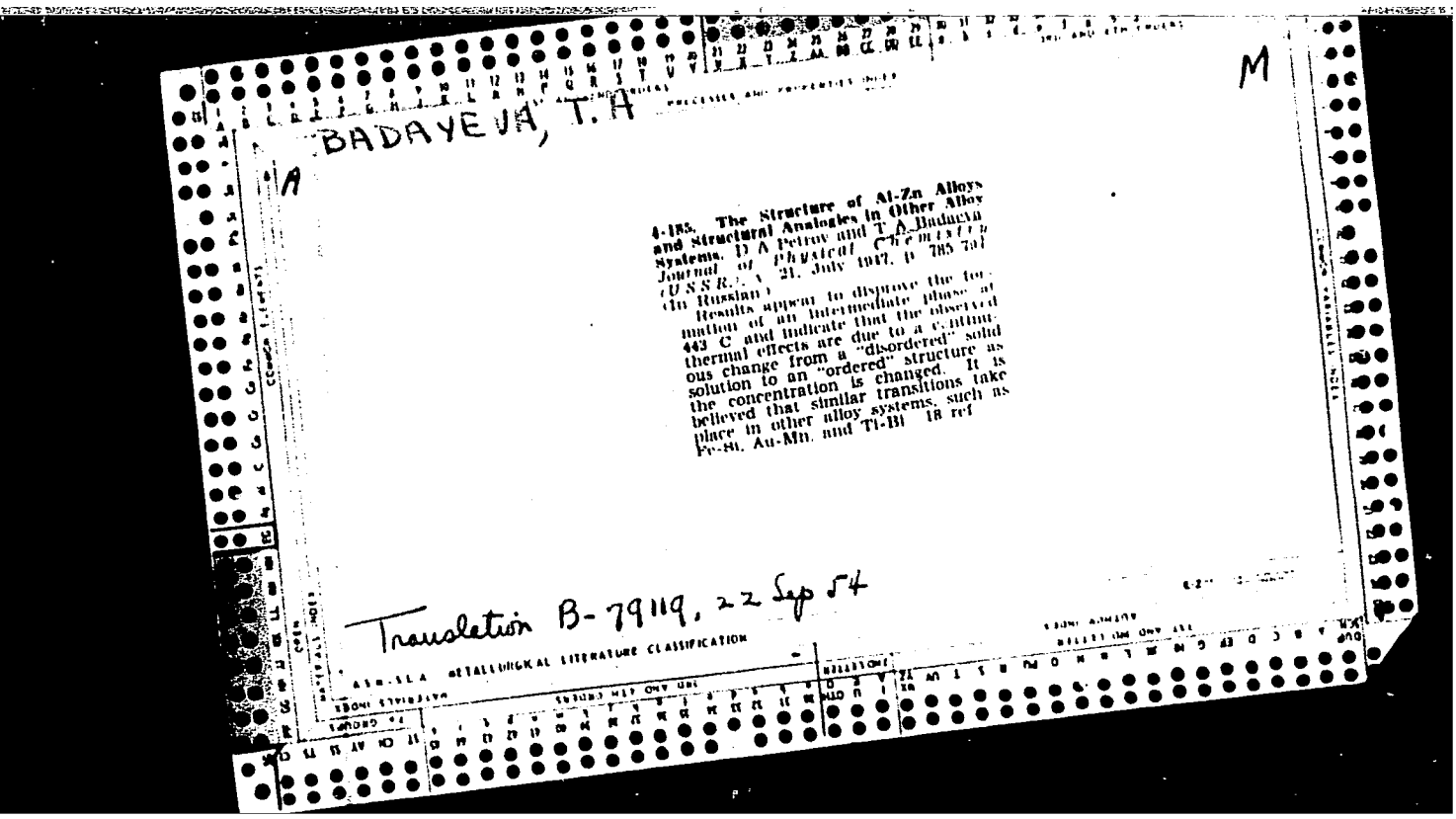
beryllium and 3.7% copper than for the binary aluminium-coopper alloys; this is particularly the case after quenching and natural ageing. --MA

Inst. Gen. and Inorganic Chemistry im N. S. Kurnakov, Acad. Sci. USSR

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102930005-1"

BADAYEVA, T. A. (c1912)

"Lattice Constants of Zn-Al Alloys," Vest. Ak. Nauk SSSR, 4, 1947.



BADAYEVA, T.A

M

A

4-185. The Structure of Al-Zn Alloys and Structural Analogies in Other Alloy Systems. D A Petrov and T A Badayeva Journal of Physical Chemistry (USSR), v 21, July 1947, p 785 7p (In Russian)

Results appear to disprove the formation of an intermediate phase at 443 C and indicate that the observed thermal effects are due to a continuous change from a "disordered" solid solution to an "ordered" structure as the concentration is changed. It is believed that similar transitions take place in other alloy systems, such as Fe-Ni, Au-Mn, and Ti-Bi 18 ref

Translation B-79119, 22 Sep 54

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PA 27/49T14

USSR/Chemistry - Aluminum, Solid Solutions of, Feb 49
With Magnesium and Silicon
Chemistry - Aluminum, Solid Solutions, With Zinc

"The Presence of Molecular Formations in Ternary, Primary Solid Solutions of Aluminum," T. A. Badayeva, 4 pp

"Dok Ak Nauk SSSR" Vol LXIV, No 4 [illegible]-33-36

Attempts to determine whether compounds exist which form as separate molecules during a definite stoichiometric composition of the components in subject solutions. Uses isothermals of electrical

27/49T14

USSR/Chemistry - Aluminum, Solid Solutions of, Feb 49
With Magnesium and Silicon (Contd)

resistance for various solutions of aluminum with magnesium and silicon or zinc. Theorizes that the chemical nature of ternary solid aluminum solutions depends upon the character of interaction of two other components, and upon the chemical individuality of the intermetallic phase with which the solid solution is found in equilibrium. Submitted 26 Nov 48

27/49T14

BADAYEVA, T. A.

MH

BADAYEVA, T.A.

2.

"Solubility of Tin in Aluminium in the Solid State. T. A. Badayeva and R. I. Kuznetsova (*Doklady Akad. Nauk S.S.S.R.*, 1950, 73, (3), 507–509; *C. Abs.*, 1950, 44, 7210).—[In Russian]. Microstructures of Al-Sn alloys were investigated on samples annealed for 240 hr. at 210° C. and 170 hr. at 180°, 150°, or 100° C., after slow cooling from 210° C., and quenching in ice water. Cooling to room temp. was extended over 170 hr. Elect. conductivity was determined on samples annealed 690 hr. at 210° C. and quenched in ice water. Results are given for alloys contg. up to 5 wt.-% Sn, in the form of curves of the elect. conductivity, the lattice parameter (from Debye X-ray patterns, on samples quenched from 210° C.), and the liquidus and solidus curves (from thermal analysis of samples quenched from 210° C.). The elect. resistivity of Al does not change with small addn. of Sn; it increases slightly with further increasing Sn content up to 5%. The linear shape of the variation indicates the absence of any significant range of solid soln. In micrography, samples quenched from 210° C. show, at as low as 0·1–0·3 wt.-% Sn, discontinuous boundaries of polyhedra with sepn. of a second phase, evidently pure Sn. This sepn. along the grain boundaries becomes quite plain with 0·5 wt.-% Sn. In samples quenched from the lower temp., or slowly cooled to room temp., decompn. of the solid soln. is noticeable at as little as 0·1% Sn. Differential thermal analysis showed arrests corresponding to the eutectic (229° C.) even with as little as 0·3% Sn. The lattice parameter remains const. from 0·1 up to 5% Sn, which again confirms the two-phase nature of the alloys. Sn lines appear at 1% Sn. These results invalidate the published figures of solid solubility of Sn in Al, which range from 2 to 20% Sn. The actual solid solubility is of the order of 0·01%. This low solubility is determined by the unfavourable electrochem. factor (different groups of the periodic system) and the unfavourable vol. factor (11% difference in the atomic radii).

Mbr., Lab. Light Alloys, Physical-Chemical Analysis Sect., Inst. General & Inorg. Chemistgry im. N. S. Kurnakov, Dept. Chemical Sci., Acad. Sci., -1950-.

BADAYEVA, T. A.

18(6)

PHASE I BOOK EXPLOITATION SOV/1896

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya (Metallurgy, Study of Metals, and Physicochemical Methods of Investigation) Moscow, Izd-vo AN SSSR, 308 p. (Series: Its: Trudy, vyp. 3) Errata slip inserted. 3,000 copies printed.

Resp. Ed.: I.P. Bardin, Academician; Ed. of Publishing House: A.L. Chernov; Tech. Ed.: I.F. Kuzmin.

PURPOSE: This book is of interest to researchers in metallurgy, as well as to the technical personnel of the metallurgical industry.

COVERAGE: This volume of the Trudy (Transactions) of the Institut metallurgii imeni A.A. Baykova (Metallurgical Institute im. A.A. Baykov) contains 31 studies on metallurgy, individual metals and alloys, and physicochemical methods of investigation. Some of the studies pertain to the reduction of titanomagnetites, the viscosity and other characteristics of blast furnace slag, dislocation in metals, cracking of metals due to corrosion, simultaneous

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solubility of metals at various temperatures, apparatus for measuring electrical resistance and for determining the melting point of alloys and metals, optical spectral analysis, quantitative determinations by the sublimation method, and aging of alloys. Each study is accompanied by references.

TABLE OF CONTENTS:

Metallurgy, Study of Metals (Cont.) SOV/1896

IVANOV, O. and BADAYEVA, T.

BADAYEVA, T.

"Phase Diagrams of Certain Uranium and Thorium Systems."

paper to be presented at 2nd UN Intl.' Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.

BADAYEVA, T.A.; KUZNETSOVA, R.I.

Structure of aluminum-magnesium-tin alloys. Trudy Inst.met. no.3: 203-215 '58. (MIRA 12:3)
(Aluminum-magnesium-tin alloys--Metallography)

BADAYEVA, T.A.; KUZNETSOVA, R.I.

Investigating the liquidus surface in aluminum-base solid solutions of the aluminum - magnesium - germanium system. Trudy Inst.met. no.3: 216-230 '58. (MIRA 12:3)
(Aluminum alloys--Metallography) (Thermal analysis)

BADAYEVA, T.A.

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pereversev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Card 6/11

5(2) SOV/78-4-8-27/43

AUTHORS: Badayeva, T. A., Alekseyenko, G. K.

TITLE: The Phase Diagram of the System Thorium-Zirconium (Diagramma sostoyaniya sistemy toriy - tsirkoniy)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1873-1880 (USSR)

ABSTRACT: The assumptions of the shape of the liquidus curve which were made in the earlier publications were examined by the authors because they differed from one another and because they were not experimentally confirmed. The alloys produced from pure thorium and zirconium iodide (analyses in Table 1) were hardened at different temperatures (Table 2). Their microstructure (Figs 2,3) was investigated, their hardness (Fig 6) was measured, moreover, the X-ray pictures were taken. On the basis of the experimental data the phase diagram (Fig 1) was constructed. β_{Th} and β_{Zr} form at high temperatures an uninterrupted series of solid solutions with a volume centered cubic crystal lattice. In the case of strong hardening (1000°) the volume centered lattice is preserved only in the alloy with 73.93 and 77.50 at% Zr. In the other alloys the transformation

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The Phase Diagram of the System Thorium-Zirconium

of the volume centered cubic lattice into a surface centered cubic lattice of α'_{Th} takes place. The alloys with 40-70 at% Zr decompose into two solid solutions with surface centered cubic lattice of α_{Th} and α'_{Th}. In alloys with 84.0-91.27 atom% Zr a martensite transformation takes place in the hardening: $\beta_2 \rightarrow \alpha_{Zr}$. At 945° and 54 atom% Zr the solid solution (with volume centered lattice) is decomposed into two solid solutions with different Zr content which are immiscible between 945-920° ($\beta_1 + \beta_2$). At 920° and 40 at% Zr a monotectoid transformation may be observed: $\beta_2 \rightleftarrows \alpha_{Th} + \beta_2$. The phase α_{Th} contains 14 at% Zr, phase β_2 69.5 at% Zr. Between 920 and 1350° the α_{Th}-phase (with surface centered cubic lattice) is separated from the solid solution of thorium in zirconium (with volume centered cubic lattice) by a two-phase-range $\alpha_{Th} + \beta_1$ which rapidly decreases with increasing temperature. At 650° and 86 at% Zr a eutectoid decomposition of the solution

The Phase Diagram of the System Thorium-Zirconium

according to the scheme $\beta_2 \rightleftharpoons \alpha_{Th} + \alpha_{Zr}$ takes place. There are 6 figures, 2 tables, and 2 references.

SUBMITTED: May 14, 1958

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D258/D302

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21.2100

AUTHORS: Ivanov, O. S., Badayeva, T. A., Semenchenkov, A. T. and Kuznetsova, R. I.

TITLE: The structure of the system uranium-molybdenum at 600 - 1200°C and the properties of its alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Stroyeniye splavov nekotorykh sistem s uranom i toriyem. Moscow, Gosatomizdat, 1961, 48-67

TEXT: This work was aimed at providing experimental data for the construction of an equilibrium diagram for the above system, in the temperature region of 0 - 800°C and for the composition range of 0 - 32 at.-% molybdenum. Firstly, the region of occurrence of the ß-phase was explored by studying the transformations, occurring in alloys containing 0.5 - 5 at.-% Mo. The samples were cut from alloys cast in a high-frequency furnace, homogenized for 48 hours, at 800°C and then successively held at 600°C (12 hrs), 500°C (240 hrs), and 400°C (240 hrs). Dilatometric investigation at up to

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